

INSTRUCTOR'S EDITION

Second Edition

# Linguistics for Everyone

An Introduction

Kristin Denham  
Anne Lobeck

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Consonant Phonemes of English														
	Bilabial		Labiodental		Interdental		Alveolar		Palatal		Velar		Glottal	
Stop	p	b					t	d			k	g		
Fricative			f	v	θ	ð	s	z	ʃ	ʒ				
Affricate									č	ǰ				
Nasal		m						n				ŋ		
Glide	ɱ	w								y			h	
Liquid								l r						

= voiceless

= voiced

You may prefer to use the following alternative symbols for the palatal affricates and fricatives:  
 š = ʃ, ʒ = ʒ, č = tʃ, and ǰ = dʒ.

Non-Alphabetic Consonant Symbols with Examples			
Symbol	Word-initial	Word-medial	Word-final
θ	thin, thank, thought	author, Arthur	bath, breath
ð	then, though	wither, feather	bathe, breathe
š	ship, charade	dishes, nation	fish, rash
ʒ	genre	measure, casual	rouge, garage <sup>1</sup>
č	chip, cello	riches, kitchen	ditch, which
ǰ	gem, jump	bludgeon, bridger	ridge, judge
ŋ	N/A	ringer, singing	wing, tongue
ʍ	what, which <sup>2</sup>	awhile	N/A

<sup>1</sup> In some dialects, these words would have /j/ rather than /ʒ/.

<sup>2</sup> These words begin with /w/ rather than /ʍ/ for most American English speakers.

Monophthongal Vowels with Example Words			
	Front	Central	Back
High	i (beat) ɪ (bit)		u (boot) ʊ (put)
Mid	e (bait) ɛ (bet)	ə (tuna) ʌ (but)	o (boat) ɔ (bawdy)
Low	æ (bat)		a (body)

The most common **diphthongs** in American English are

/ay/ as in *wide* and *sky* (also sometimes written as /aɪ/ or /ai/)

/aw/ as in *loud* and *cow* (also sometimes written as /æw/, /æʊ/, or /aʊ/)

/oy/ as in *toy* and *foil* (also sometimes written as /ɔy/, /ɔɪ/, or /oɪ/)



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# Preface

**L**inguistics is the scientific study of language. You might think, when you see the word *scientific*, that linguistics is not for you and that a scientific approach to language will be dry, technical, and of no real relevance to your everyday life. In fact, just the opposite is true: the scientific study of language is not just interesting but far more fun than peering into a test tube, because the “laboratory” in which we construct experiments, gather data, and form theories is everyday life, where we use language all the time.

*Linguistics for Everyone* will lead you through the story of language, of how we acquire it as children and how it changes over time. We look at how language varies from country to country, region to region, and even city to city. Drawing on both scholarship and experience, we discuss what’s true about language and what’s not. Some exciting research is under way (e.g., Is there a gene for language? Is the left side of the brain better at language than the right? Does watching TV help babies learn language?), and misconceptions abound (e.g., French is more romantic than German, English descended from Latin, some languages are more advanced or more primitive than others, people who say “gonna” are using sloppy speech). We explore many of our ideas about language, not all of which are based on linguistic facts; many are rooted in social and cultural (mis)perceptions. We also take a new look at grammar, which you might think of as the list of rules you learned in school, but you will learn about the rules of language that allow you to produce and understand sentences you’ve never said or heard before. Language is part of almost everything we do, and knowing more about it tells us more about ourselves.

## Innovative Approach

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Linguistics is a relatively young field, and for a long time it has been confined to linguistics departments in universities. But this is all changing as linguistics becomes more and more interdisciplinary; everyone is interested in language, and linguistics isn’t just for linguists anymore. Linguistics contributes to our understanding of anthropology, sociology, computer science, speech pathology, communications, journalism, history, political science—you name it. In short, language is everywhere, and linguistics is for everyone. *Linguistics for Everyone* is intended for anyone with an interest in language, and its goals are twofold: to pique your interest in language

and to familiarize you with the core areas of linguistics, the science of language. To that end, we present theoretical concepts in ways that capture the interest of the nonspecialist while providing solid background for someone who wishes to study linguistics in more depth. This balance is reflected in the topics we choose to treat and how we treat them, in the wealth and variety of exercises at the end of every chapter, and in the groundbreaking special features that offer information on “living language” and connect linguistics with life in the real world.

## Organization of Content

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The book begins with an introductory chapter that addresses such basic issues as defining this thing we call language, prescriptive versus descriptive grammar, and differences between the human language system and other animal communication systems. The second chapter is devoted to language, mind, and brain and addresses both psycholinguistic and neurolinguistic evidence for humans’ innate capacity for language. Chapters 3 through 10 address the core areas of linguistics in detail, with two chapters devoted to each area (phonetics and phonology, morphology, syntax, and semantics). Chapters 11 and 12 focus on the history and development of English and language change, variation, and dialects. But these topics are not confined to these chapters; language change and variation are recurrent themes throughout the book. Chapter 13 explores writing systems from pictographs to text messages and discusses the development of spelling, punctuation, and standardization. Chapter 14 is the capstone chapter on the life cycle of language: language genesis, language endangerment, and language death. This final chapter ties together important issues and themes addressed throughout the book. And, of course, the glossary and bibliography are very helpful tools.

## Hallmark Features

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To present both the science of linguistics and the language of communication, we have designed and arranged the material in a variety of formats with unique features to facilitate navigation through the chapter, to show relationships among elements, and to aid in study and review.

The first page of every chapter offers an overview of the chapter’s content:

- Specially rendered line art shows one or more humanlike characters engaging in an activity related to the chapter’s main topic.
- “Chapter at a Glance” is a chapter outline listing the main headings.

- “Key Concepts” prompts consideration of the major ideas explored in the chapter.
- A list of special features and their titles previews the chapter’s “living language” topics.

**RPE 1** A brief, relevant epigram offers a spark of humor or pith (or both) before the introduction to the core material. The core material is presented in a fresh, accessible manner and offers many examples in English and several other languages to clarify the linguistics at work. To facilitate study and review of the material, key terms appear in boldface in the text and are repeated in the adjacent margin with their definitions. To give students the opportunity to practice and explore concepts as they are introduced in the text, notes “tacked” in the margins indicate the numerals of the related exercises in the “Review, Practice, and Explore” section at the end of the chapter.

To show the language at work and in life, the core material is enhanced with five special features that present information related to the topics discussed in the text. They highlight language as an immediate, changing, varied, and fascinating entity.

### Language Alive!

“Language Alive!” considers the way we speak, the way we used to speak, and the way some but not all people speak. It highlights language change, variation, and diversity as it explores the mystery of such issues as why words spelled with *-ough* are pronounced so many ways, whether women and men really speak differently, whether there’s really anything wrong with *aks*, and whether double negatives are really ungrammatical.

### Did You Know...?



“*Did You Know . . . ?*” offers background and commentary on interesting and relevant topics,

such as whether Rico the Talking Border Collie can really talk, whether someone can be *very dead*, whether baby talk promotes or hinders language development, and why the Grimm brothers really wrote all those tales.

### LINGUISTICS IN THE NEWS

“*Linguistics in the News*” calls attention to the moments in which linguistic science crops up in the public eye. The media limelight shines on such news items as the controversy over grammar

in the Scholastic Aptitude Test, political language, linguistic profiling, and the premiere of *The Linguists* at the Sundance Film Festival.

### Accent on

“*Accent on . . .*” shows how linguistics is actually used in such varied professions as software development, speech pathology,



forensics, and psychology. Linguistics informs how we teach reading and spelling, study and interpret law, evaluate and treat language disorders, and even name new products.

**hwæt!** *Hwæt!* (rhymes with *that*) is Old English for “Hey! Listen up!” You might recognize it as the first word of the epic poem *Beowulf*. Our *hwæts* are sprinkled in the margins to alert you to such entertaining tidbits as these: The Washington State House of Representatives adopted a resolution to honor Washoe as the first nonhuman to acquire a human language; Navajo has more than a hundred thousand native speakers; and Steven Spielberg’s four grandparents came from the Ukraine and spoke Ukrainian.

Every chapter has a summary that offers quick review of the main points as well as a list of sources and resources for further investigation.

“Review, Practice, and Explore” closes every chapter with an abundance of exercises and activities that target issues of broad interest rather than restricting the focus to traditional scientific linguistic analysis. It includes not only linguistics puzzles on English and other languages but also topics for research, ideas for classroom activities, and suggestions for fieldwork (surveys, interviews, and so on).

Our goal in writing this book is to share with you our own fascination with language, to introduce you to fundamental insights and advances of linguistic science, to raise your awareness of this uniquely human phenomenon, and to provide you with some tools with which to explore language on your own. Have fun!

## New in the Second Edition

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Based on very valuable feedback from instructors, we have revised and updated *Linguistics for Everyone* to keep it current and accessible. We have inserted new examples in more languages, updated maps, clarified explanatory diagrams and symbols, and improved charts and tables. We have revised chapter exercises (RPEs) to provide more practice of key concepts and in more languages. We have replaced some content in the hallmark features with current topics (e.g., the language Na’vi, Watson the computer on *Jeopardy!*), inserted new *hwaets*, and updated sources and resources.

Each chapter of *Linguistics for Everyone* has been carefully reviewed, and expanded in some cases and condensed in others.

In Chapter 1, about defining and learning language, new examples of parameters clarify the principles of Universal Grammar, and condensed sections on Noam Chomsky, generative grammar, and influences on modern linguistics clarify those aspects of modern grammatical theory relevant to this book.

In response to positive feedback, we kept the introduction to the brain in Chapter 2 to pique students' interest in the biological foundations of language right away. We remain unique in introducing pidgins and creoles here, along with Nicaraguan Sign Language.

Chapter 3, on phonetics, includes alternative IPA symbols, clarified articulation of consonants, and new information on glottal stops, mid-central vowels, lip-rounding, and bunched liquids.

Chapter 4, on phonology, has clarifications of assimilation and deletion/simplification and new RPEs on phonemes and allophones in Korean and Hungarian.

Revisions of Chapters 5 and 6, on morphology, focused on clarification. In Chapter 5, that includes word classes, affixation (new example of Icelandic verb), inflection (for gender), and a new section on clitics, as well as new RPEs on morphemes in Quiché and Turkish. Chapter 6 has a new chart of two Greek verbs, new acronyms in French and German, a new section on retronyms, and new RPEs on morphemes in Yoruba and Arabic.

Chapters 7 and 8, on syntax, are substantially revised, with more accurate phrase structure rules including a new section on clauses and a discussion of Aux as a separate constituent, additional examples of coordination, revised tree diagrams, and clarified explanations. Improved RPEs, and a new one to practice diagramming, focus more accurately on concepts in the chapters.

Chapters 9 and 10, on semantics, are streamlined, notably the discussion of metaphors. Yet they contain some additional information about metaphors, markedness, common/proper nouns, degree modification, and the meaning of polysemy and retronyms. The section on argument structure has been revised for clarification.

Chapter 11, “The Story of English,” needed little revision. We added a bit of information on Hellenic languages and some history about Alfred the Great, and we replaced the Old English version of the Lord’s Prayer with an excerpt from *The Battle of Maldan*.

Likewise, Chapter 12, “English Goes Global,” required only some fine-tuning, although we did add detail on the AAVE verb system to the discussion of systematic rules.

Chapter 13, on the written language, benefitted from additional details about alphabets, punctuation (new section on apostrophe), the Great Vowel Shift, the *OED*, electronic English, and changing standards.

Chapter 14, “The Life Cycle of Language,” needed only updates of some data as well as sources and resources.

## Instructor’s Resource Manual and Answer Key

An Instructor’s Resource Manual and Answer Key is available with the text. Here you will find the answers to the “Review, Practice, and Explore” activities along with suggested discussion questions and research topics.

You can also find sample course schedules here that suggest ways to organize the textbook material.

## Introduction to Linguistics Resource Center

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The Introduction to Linguistics Resource Center has been carefully designed to enhance the instruction in *Linguistics for Everyone*. Clearly organized around the major subject areas in linguistics, the Resource Center offers web links, quizzes, flash cards for key terms, extensive sound files showcasing pronunciations by native speakers, PowerPoint slides, and more.



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Writing a textbook turned out to be far more demanding than either of us anticipated, and we are deeply indebted to our families, friends, colleagues, and students for both their contributions and their support.

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During the process of writing the first edition of this book, the manuscript was extensively reviewed numerous times, and reviewers gave us excellent insights, criticisms, and commentary. We thank the following colleagues for the time and effort they have committed to this project and for the invaluable feedback. We usually took their excellent advice, which has doubtless improved this book:

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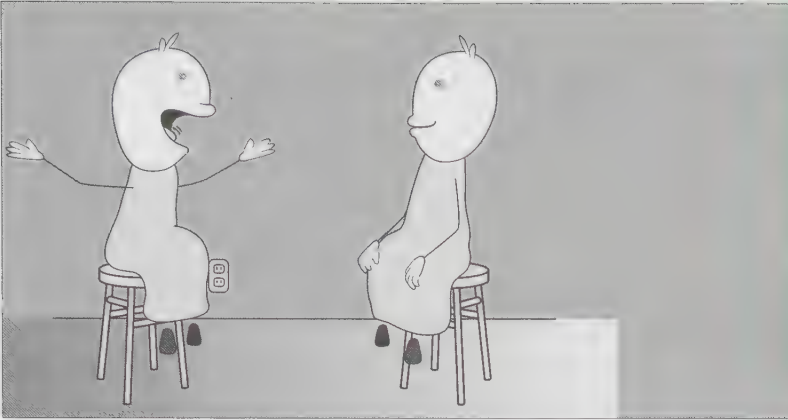
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## Chapter at a Glance

# What Is Language and How Do We Study It?

## Key Concepts

- Human language has numerous features that distinguish it from other communication systems.
- People have unconscious knowledge of language and use this knowledge to speak and understand language.
- All languages have grammar, a system of phonological, morphological, syntactic, and semantic rules.
- A language is really a continuum of language varieties that change over space and time.
- Children are hardwired to acquire a linguistic rule system, and they do so while very young, without direct teaching.
- All languages have the same basic framework: Universal Grammar.

## Did You Know . . . ?

Rico and Chaser, Smarter Than the Average Dogs  
Noam Chomsky

**Language Alive!** Sign Language Diversity

**Linguistics in the News** The Language Blog and Eggcorns

**Accent on** The Linguistic Society of America

### What Is Language?

Our Language Expertise  
Acquiring versus Learning a Language

### Human Language and Animal Communication

Can Other Animals Learn Language?  
Two Case Studies: Washoe and Nim

### What Is Grammar?

The Components of Grammar  
What Is Grammatical?  
Grammar Across Space and Time  
Universal Grammar

### The Scientific Study of Language

Noam Chomsky and Generative Grammar  
Influences on Modern Linguistics

### Linguistics Today

#### Summary

#### Sources and Resources

#### Review, Practice, and Explore

*Language is a means of getting an idea from my brain into yours without surgery.*

—MARK AMIDON

**L**anguage is what makes us human, and we all seem to be naturally curious about it. We do much more than just communicate with language: we play games with it (pig latin, jump-rope rhymes, jokes, *Scrabble*, and even spoken-word poetry are all types of language games); we use it to identify each other (we can sometimes guess where someone is from by their accent or by the words they use for things); we have many questions and often very strong feelings about it. We value some ways of speaking over others, and we all have our pet peeves about language. Numerous websites, newspaper columns, books, and entire radio and television programs are devoted to interesting facts and musings about language as well as to critiques of language “misuse” and “deterioration.”

Have you ever wondered:

- Does my dog *really* understand what I’m saying?
- Is sign language different from body language?
- Why do some people say “ahnt” rather than “ant” for *aunt*?
- Where did English come from, and is it really related to Latin?
- Why do the words *Yeats* and *Keats* sound different when they’re spelled almost the same?
- Do people who are bilingual ever mix up their languages?

After reading this book, you will be able to answer these questions about language and, we hope, many others you may have.

In addition to the many questions we might have about language and how it works, most people have strong opinions about it. We have definite ideas about how language sounds, how we learn it, the right way to use it, and what it says about people’s intelligence or education.

Do you agree with any or all of the following opinions?

- French sounds more romantic than German.
- The sentence *I don’t know nothing* is sloppy English.
- Some languages are more primitive than others.
- People who say *aks* instead of *ask* are being lazy.
- We are taught language by our parents and teachers.
- Writing is more perfect than speech.

Each of these statements is probably familiar to you, but none of them happens to be true. What such statements, or language myths, really tell us is that ideas about language are deeply woven into culture. The way

we talk, just like the way we act and dress, shapes how we think of ourselves and how we think of others. A thorough understanding of language equips us to answer our many questions about this uniquely human phenomenon and to separate linguistic fact from fiction.

## What Is Language?

*hwæt!*

*Hwæt* (rhymes with *that*) was an attention-getting interjection used in Old English. You may recognize it as the first word of the Old English poem *Beowulf*. Our *hwæts* will appear throughout the text to alert you to interesting tidbits.

One of the first questions we need to answer is, ‘What is this thing called *language*, anyway?’ Even though we use it every day, language is actually hard to define. And though we can’t immediately answer the complex question ‘What is language?’ each of us is already an expert in the language we grew up speaking. We don’t have to stop and think about how to pronounce words, or how to form questions, or how to talk about something that will happen in the future or something that happened in the past. Still, each of these tasks, among thousands of others, is actually pretty complex. And it’s amazing that we know how to do it—effortlessly, without direct instruction from anyone.

### Our Language Expertise

Perhaps a more interesting question about language is, ‘What is it that we know about language?’ What does a speaker of English, for example, have to know about English in order to speak the language and understand the English spoken by others?

For instance, every speaker of English usually knows that the following sentences are not “normal” sentences in English. (Sentences that are not “normal” or possible in a language are marked with an asterisk, \*.)

- \*Destroyed the city the hurricane.
- \*Sick Lionel seems.
- \*Chicago a large city in the Midwest is.

Any English speaker also knows how to rearrange the words in the impossible sentences to make them fully acceptable English sentences.

- The hurricane destroyed the city.
- Lionel seems sick.
- Chicago is a large city in the Midwest.

So we know, as English speakers, what is a possible utterance in our language and what is not. This suggests that we know rules of English word order, even if we can’t define these rules any more specifically than to say that we just *know* them. Indeed, we don’t learn these rules in school, but we all mastered



them before kindergarten. We acquire the rules of our language at an early age just by being exposed to it.

## Acquiring versus Learning a Language

**language acquisition** natural, unconscious process of language development in humans that occurs without instruction

**language learning** process of gaining conscious knowledge of language through instruction

The process of **language acquisition** is different from the process of **language learning**. Acquisition takes place unconsciously, without direct instruction. Any of us who has studied a second language in school knows that learning a language is a conscious (and often difficult!) process requiring practice and study. Our ability to acquire our native language, on the other hand, is similar to a bird's ability to fly. Birds don't teach their offspring to fly; the young birds just do it when they reach a certain developmental stage and are in the appropriate environment. Similarly, children who are exposed to language acquire it regardless of race, class, or culture.

This is not to say that in addition to *acquiring* our languages, we don't also *learn* many language rules. Think about some of the language rules you've learned in school or from family and friends. You may have learned when to use *who* and when to use *whom*, for example, or to avoid saying *ain't* or *I don't got none*. You may have learned to avoid saying *John and me went to the store* and to say instead *John and I went to the store*. These rules of language also form part of our linguistic system, but they are consciously learned rather than unconsciously acquired.

## Human Language and Animal Communication

**design features of language** proposed by Hockett, the features that distinguish human language from other communication systems

One way to gain more insight into our linguistic system is to take a look at the communication systems of other species. Let's examine the ways in which some of the more sophisticated animal communication systems differ from human language. Linguist Charles Hockett proposed a list of **design features** that characterize human language and distinguish it from other communication systems (other animal systems, traffic signals, etc.). Hockett's list has been revised and reexamined by many linguists, but the features of human language that remain on almost every researcher's list include the following.<sup>1</sup>

- **Semanticity** Specific signals can be matched with specific meanings. In short, words have meanings.
- **Arbitrariness** There is no logical connection between the form of the signal and the thing it refers to. For example, *dog* in English is *Hund* in German and *perro* in Spanish.

1. More current treatments of the unique characteristics of human language include Hauser et al. (2002), who argue that *recursion*, the ability to embed one sentence within another, is what makes human language unique. We take this (rather technical) argument up in Chapter 8 ("Linguistics in the News: Starling Syntax?").

- **Discreteness** Messages in the system are made up of smaller, repeatable parts rather than indivisible units. A word, for example, can be broken down into units of sound.
- **Displacement** The language user can talk about things that are not present—the messages can refer to things in remote time (past and future) or space (here or elsewhere).
- **Productivity** Language users can understand and create never-before-heard utterances.
- **Duality of patterning** A large number of meaningful utterances can be recombined in a systematic way from a small number of discrete parts of language. For example, suffixes can be attached to many roots, and words can be combined to create novel sentences.<sup>2</sup>

Many animals have complex communicative interactions that do not share Hockett's design features of human language. Consider, for example, the communication system of the African vervet monkey, as studied by Struh-saker (1967). In this system, there are three types of predators (leopard, eagle, and snake), and there is a distinct call for each. A loud bark signals a leopard; a coughing sound signals an eagle; a chatter sound signals a snake. The vervet's packmates respond appropriately to the calls (running up a tree to safety from a leopard, diving into brush to hide from an eagle, or scanning the ground for a snake) even if they cannot see the predator.

How many of Hockett's design features does the vervet monkeys' communication system meet? There seems to be semanticity: the signals or calls do have a meaning. There is also arbitrariness; just as there is no logical connection between the English word *monkey* and the animal, there is no logical connection between the chatter call and a snake or between the coughing sound and an eagle. Calls are distinct for each predator but can't be broken down into smaller parts, so the vervet system seems to lack discreteness (and also note that the calls are all of the same type: to indicate alarm). No calls are used out of context, so there is no displacement. The species relies on a single set of calls, so there is no productivity; and calls are not combined to form new calls, so there is no duality of patterning.

Zoologist Karl von Frisch (1967), in a series of well-known studies, found that honeybees appear to have displacement; by performing a "dance", they are able to communicate to their hivemates how to get to the pollinating flowers. And some birdsongs seem to have some degree of duality of patterning. Discrete pieces of song may be combined in different ways to indicate distinct meanings. The communication systems of many primates, birds, bees, and cetaceans have all been studied extensively. Though they are amazingly sophisticated, intricate, and fascinating systems, and though there is still much to be learned about them, they all lack some of the design features of human language.

## RPE 1.1

## RPE 1.2

2. Based on Hockett (1960).

## Can Other Animals Learn Language?

hwæt!

Though whether animals can acquire human language is subject to debate, in February 2008 the Washington State House of Representatives adopted a resolution to honor Washoe as “the first nonhuman to acquire a human language.” She died in October 2007 at the age of 42.

Whether animals can learn language is a question separate from whether animals have humanlike communication systems. Numerous researchers have attempted to teach intelligent apes various systems of communication, with the goal of enabling the apes to use those systems to communicate with humans and with each other. These attempts have had varying degrees of success, but each offers insights into the learning capacity of these primates as well as into some of their limitations.

The question of whether chimpanzees or gorillas have the same mental capacity as humans to learn language is difficult to answer. For one thing, primates lack the same vocal apparatus as humans, so they must be taught language in another modality, or means by which language is produced. Some have been taught to manipulate symbols of some kind; others have been taught manual signs. Such research requires experiments designed to measure, for example, whether a primate’s understanding of a word or symbol is comparable to a human’s.

More basic questions are whether Hockett’s design features of language accurately capture the features of human language and whether they are an accurate yardstick for assessing a different species’ understanding of human language. Yet another issue is the role of the trainer in such experiments; humans acquire language when exposed to it and have no trainers, so how does one measure language learning versus language acquisition? Experiments that measure language learning in species other than humans are thus extremely difficult to design, and results are hard to observe and measure. Two well-known studies of chimpanzees illustrate some of the complexities involved in this kind of research.

RPE 1.3

### Two Case Studies: Washoe and Nim

In the 1960s, Allen and Beatrix Gardner embarked on their study of the chimpanzee Washoe (Gardner et al. 1989). The Gardners raised Washoe much like a human child and communicated with her in signs from American Sign

Language. The Gardners’ idea was to see whether Washoe, given the same language acquisition environment as a child, would acquire sign language. Washoe mastered around 200 signs and was thought to understand many more. She was even thought to have produced some creative combinations of signs on her own. At the time, the Washoe experiment was considered a great success.

In the late 1970s, Herb Terrace taught the chimp Nim Chimpsky (a play on the name of world-famous linguist Noam Chomsky) 125 signs and argued that Nim had mastered some rudiments of grammatical structure as well (Terrace 1979). But after viewing videotapes of Nim’s signs, Terrace saw

hwæt!

The 2011 documentary “Project Nim” describes Nim Chimpsky’s life with humans.



## Did You Know...?



## Rico and Chaser, Smarter Than the Average Dogs

In 2004, psychologists Juliane Kaminski, Joseph Call, and Julia Fischer (2004) of the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany, found that a border collie from Germany called Rico exhibited an extraordinary ability to learn new names for things. When presented with a new toy and told its name, Rico was able to retrieve it from a pile of other toys with almost 100 percent accuracy. This ability is similar to one seen in children, a process called *fast mapping*. Rico was also able to remember the names of about 200 toys, even after a month of neither hearing the name nor seeing the toy. More recently, another border collie, Chaser, trained by researchers John Pilley and Alliston Ried (2010) of Wofford College, learned the names of 1,022 objects. Chaser also clearly understood the distinction between the names of objects (proper nouns) and the commands to fetch a particular object (verbs). Another experiment revealed that Chaser also understood names for categories of objects (common nouns). She learned, for example, that “toy” referred to the 1,022 objects she was allowed to play with, each with a different proper name. She also learned to understand which “toys” fell into the subcategory “Frisbee” and which into the subcategory “ball”. According to researcher Reid, “This research is important because it demonstrates that dogs, like children, can develop extensive vocabularies and understand that certain words represent individual objects and other words represent categories of objects, independent in meaning of what one is asked to do with those objects.” Rico’s and, to an even more astonishing extent, Chaser’s abilities share design features with human language, namely semanticity and arbitrariness.

that Nim almost never produced signs spontaneously; rather, his signs were repetitions of his trainers’. Nim also signed only in response to food, and his combinations of signs did not exhibit consistent word order patterns, suggesting that he had not, in fact, mastered grammatical rules. Terrace reversed his position that Nim had acquired language, concluding not only that the Nim study was flawed but that many others, including the Washoe study, were flawed as well for similar reasons.

RPE 1.4

RPE 1.5

## What Is Grammar?

**grammar** linguistic rule system that we use to produce and understand sentences

Hockett’s design features describe the basic properties of the rule system shared by all human languages. In particular, the ability to combine discrete units into larger units forms the foundation of what linguists call **grammar**. A grammar is a complex system of rules that governs how speakers organize sounds into words and words into sentences. (Sign languages also have grammar and differ from spoken language only in terms of modality. We



talk more about sign languages later in the chapter.) It is our knowledge of grammar that allows us to create sentences we've never heard or uttered before. No other communication system (birdsong, whale songs, bee dances, or monkey calls) appears to have the equivalent of human language grammar. Note that this use of the term *grammar* is different from nonlinguists' use of the term. The term *grammar* actually has quite a few distinct, though related, meanings. The dictionary *Merriam-Webster Online* (<http://www.merriam-webster.com>) defines *grammar* this way:

**1 a:** the study of the classes of words, their inflections, and their functions and relations in the sentence **b:** a study of what is to be preferred and what avoided in inflection and syntax

**2 a:** the characteristic system of inflections and syntax of a language **b:** a system of rules that defines the grammatical structure of a language

**3 a:** a grammar textbook **b:** speech or writing evaluated according to its conformity to grammatical rules

**4:** the principles or rules of an art, science, or technique <a *grammar* of the theater>; *also:* a set of such principles or rules

Under a separate entry, *Merriam-Webster Online* offers *generative grammar*: “a description in the form of a set of rules for producing the grammatical sentences of a language.” This is the definition we use here. (We discuss why this definition of grammar includes the term *generative* later in the chapter.)

**RPE 1.6**

## The Components of Grammar

The grammar of a language can be divided into components. Each component interacts with the others, but each can also be studied on its own.

- **Phonetics** The inventory of sounds in a language
- **Phonology** Rules of how sounds are combined in a language
- **Morphology** Rules of word formation in a language
- **Syntax** Rules of sentence formation in a language
- **Semantics** Rules that govern how meaning is expressed by words and sentences in a language

We'll illustrate each component briefly with examples from English and other languages.

First, let's look at phonetics and phonology. The phonetic system of English has (basically) twelve vowels, and the Hawaiian system has five. In Hawaiian, sounds are combined in such a way that all words end with vowel sounds; this is not the case in English, where many words end with consonants. English and Hawaiian thus differ both phonetically (in their inventory of sounds) and phonologically (in how the sounds are combined).

Turning next to morphology, in English we form the past participle of many verbs by attaching the suffix *-ed* to the root. For example, we attach *-ed* to the root word *learn* to derive *learned*. In German, on the other hand, the past participle of the verb *lernen* ‘to learn’ is *gelernt*, where the prefix *ge-* and suffix *-t* are attached to the root, *lern*. Although both English and German have past participles, the languages differ morphologically in the rules to form them.

Languages also differ syntactically in the ways words are arranged in the sentence. For example, in English color adjectives precede the nouns they modify, as in *red skirt* or *black cat*. In French, on the other hand, color adjectives follow the noun: *jupe rouge* ‘skirt red’ and *chat noir* ‘cat black’.

And finally, we find that languages differ semantically as well. Although all languages have kinship terms, the meanings expressed by these terms can differ, sometimes rather dramatically. In English, for example, the term *grand-* (*grandmother*, *granduncle*, etc.) refers to relatives who are two generations distant, *great-* refers to relatives three generations distant, *great-great-* refers to relatives four generations distant, and so on. The Australian aboriginal language Njama, on the other hand, has a term that refers to “any relative two generations distant,” *maili*. This term can refer, for example, to a father’s father (two generations before) or a daughter’s son’s wife’s sister (two generations after).

## What Is Grammatical?

When we talk about the grammar of a language, we mean the set of rules a speaker knows that allow him or her to produce and understand sentences in the language. A *grammatical* sentence is therefore a *possible* sentence in the language. An *ungrammatical* sentence is one that is impossible in a given language, one that a native speaker of that variety would never utter naturally. (Remember that ungrammatical sentences are marked with an asterisk, \*.) For example, of the two following sentences, the second sentence is ungrammatical because it is not a natural sentence that a speaker of modern English would use.

Sheba watched Murdock playing the banjo.

\*Sheba wonders Murdock playing the banjo.

This definition of grammaticality is probably quite different from other definitions you might be familiar with. Consider, for example, the following sentence.

Sheba don’t know nothing.

Some of you might think this sentence is ungrammatical because you have been taught that double negatives (*don’t . . . nothing*) are to be avoided. Some of you might be aware that this sentence is typically considered “incorrect” or “bad” English. Others of you might find this sentence perfectly natural in your own dialect, whether or not you are aware of the social stigma attached to double negatives. In fact, double negative constructions are grammatical (in the sense we are talking about here) in many varieties

of English, and for speakers of those varieties, this sentence is certainly a possible sentence of English. So a sentence is grammatical if a speaker would naturally produce it, regardless of its social value.

## Prescriptive and Descriptive Grammar

**descriptive grammar** set of grammatical rules based on what we say, not on what we should say according to some language authority

**prescriptive grammar** set of grammatical rules prescribed by a language authority

Given the complexity of the term *grammatical*, it's useful to make yet another distinction between the concept of grammar that forms the basis of the study of language and the more everyday meanings of the term. The kind of grammar we are talking about here is called **descriptive grammar** because it *describes* the rule system we use to produce sentences, regardless of the social value we may attach to those sentences. **Prescriptive grammar**, on the other hand, is a set of rules that *prescribes* or defines how we are supposed to speak, typically according to some authority (your older sibling, your teacher, your parents, a writing or grammar handbook). Prescriptive rules have positive social value, and sentences that do not conform to prescriptive rules often have negative social value.

To make the difference between descriptive and prescriptive grammar clearer, let's consider another example.

I don't know *who* to see.

I don't know *whom* to see.

According to the rules of prescriptive grammar, the second sentence, with *whom* rather than *who*, is considered grammatical and therefore correct. Yet most of us would probably be more likely to say the first sentence, with *who*, in our everyday speech. According to our descriptive grammar, then, the sentence with *who* is grammatical, a sentence we'd produce naturally and that sounds perfectly natural to us. Notions of correctness and incorrectness don't really come into play here—descriptive grammatical rules simply describe what we actually say; they do not assign a social value to one construction over another.

(And here's the prescriptive rule for the distinction between *who* and *whom*, in case you are curious: Use the objective or accusative form *whom* when the pronoun is functioning as a direct object, as in *I don't know whom to see*, or as the object of a preposition, as in *I wonder to whom I should address this letter*. Use *who* when the pronoun functions as the subject: *Who left?*)

RPE 1.7

## When Prescription and Description Overlap

Now, though we may be able to cite examples of rules that are clearly prescriptive (rules you've been taught in school, for example) and rules that are clearly descriptive (rules that you probably can't even describe because they are unconscious and therefore not obvious to you), the distinction between prescriptive and descriptive grammar can be rather fuzzy. Many prescriptive rules are simply unnatural; they don't conform to rules of natural language and can be learned only consciously. Others, however, are actually descriptive

rules for some speakers—the descriptive rules of the language variety that has higher social value. In this case, description and prescription overlap.

First, let's take an example of a prescriptive rule of English that is not a natural rule of any variety of English. It is completely natural in English to “split infinitives,” that is, to insert an adverb between *to* and the verb, as in *to boldly go* or *to quickly run*. There is a long-standing prescriptive rule, however, that says split infinitives are to be avoided and that only *to go boldly* or *boldly to go* are prescriptively grammatical or “correct.” This prohibition against split infinitives (which is now enforced less often than it used to be, and some of you might not even be aware that it is a prescriptive rule) originally grew out of the desire for English grammar to conform to the grammar of Latin, the language of prestige in eighteenth-century England. At that time, prescriptive grammarians proposed that because it is impossible in Latin to “split” infinitives, they should also not be split in English. But this prohibition was based on faulty logic; it is impossible to split infinitives in Latin because infinitives are single words! The infinitive ‘to precede, go out before, lead’, for example, is *praecedere* (the *-re* suffix, rather than an independent word, *to*, tells us that this form of the verb is the infinitive) and is impossible to split. Thus, applying this rule to English is an example of a prescriptive rule that is completely arbitrary and not based on the rules of natural language.

Some prescriptive rules, however, can also be descriptive rules. For example, you are likely aware of the prescriptive rule “Don’t use double negatives.” In fact, speakers of all English dialects do use so-called double negatives, though some varieties of English form negatives with a negative verb (such as *don’t know*) and an *any-* word, such as *anyway*, *anyone*, and *anywhere* (*I don’t know anything*), while other varieties form negatives with a negative verb and a *no-* word, such as *no one*, *nothing* (*I don’t know nothing*). The *no-* variety of negative is stigmatized, and it is the one that is considered prescriptively ungrammatical and incorrect. The *any-* variety, on the other hand, is considered prescriptively grammatical and correct and is an example of a prescriptive rule that is also a natural descriptive rule for some speakers, one to which positive social value happens to be attached.

## Modification: Another Overlap

From the discussion of prescriptive and descriptive grammar, you can see that the grammatical system we acquire is influenced by a variety of factors. It is shaped by what we learn in school, what we read, our desire to conform or impress, what our parents and friends tell us, the desire to belong to one group but not another, and so on. We are constantly modifying our language, sometimes to the extent that we revise and reshape our system of grammatical rules. **Modification** is also at work when we expand our vocabularies and shift from childish language to adult speech. It also plays an important role in the emergence of different dialects and in language change over time. We might modify our language to conform

### modification

adjustment, change, and modification of grammatical systems based on various social factors



to the variety that has higher social status, adopting descriptive rules that are more highly valued (we may begin to use *any-* negatives instead of *no-* negatives), and we may learn “unnatural” language rules (and avoid splitting infinitives) for the same reason. Modification therefore once again complicates the distinction between prescription and description, and we explore this complex issue from different perspectives throughout the book.

## Grammar across Space and Time

For illustration, we’ve assumed that the grammar of English is the same for all speakers, but of course this is not the case. Not everyone speaks English in exactly the same way. How do we account for differences among, for instance, British English, Irish English, and North American English, or even for the differences between how English is spoken in Boston, Massachusetts, and Birmingham, Alabama? What about the English spoken in South Africa and the English spoken in India and Jamaica? Do different varieties of a language share one grammar?

### RPE 1.8

Let’s complicate the matter even further. So far, we’ve raised the question of whether different varieties of a language, which vary over *space* or geographical area, share one grammar. What about different varieties of a language that vary over *time*? We use the word *English* for several varieties of English: Old English (the language of the famous epic poem *Beowulf*) is a variety of English, as are the Middle English spoken by Chaucer and even the Early Modern English spoken by Shakespeare. Speakers of Present-Day English can’t even understand Old English, so is Old English still English? And do forms of English that vary over time or space all have the same grammar?

Well, yes and no. “English” is actually a general label under which a number of language varieties fall. English is spoken all over the world—in India, Africa, Jamaica, Barbados, and Australia, as well as in the United States and the British Isles and in many other countries. English also has a long history and has changed (rather dramatically) over time. What we call English, then, is really a **continuum of language varieties** rather than one language with a single set of grammatical rules. When we talk about the grammar of English, we include a variety of grammars of English that all share enough of a historical and grammatical relationship to be recognized as varieties of the same language, English. Throughout the book, our examples of English might not always be familiar to you, but they are nevertheless English in terms of the continuum of language varieties we’re discussing here. We will discuss how English has changed over time (evolving from Old to Middle to Early Modern to Present-Day English) in Chapter 11, and we will discuss global varieties of English (also called “world Englishes”) as well as varieties of North American English in Chapter 12.

**continuum of language varieties** grammars that share enough of a historical and grammatical relationship to be recognized as varieties of one language

### RPE 1.9

### RPE 1.10

**dialect** a variety of a language that differs from other varieties in grammar, pronunciation, and vocabulary and that is spoken and understood by a particular group, which might be identified by region, ethnicity, social class, etc.

Linguists generally consider two language varieties to be **dialects** of the same language if the speakers of each can understand each other, that is, if the language varieties are *mutually intelligible*. This distinction between language and dialect can get fuzzy because sometimes the linguistic differences are so great that the speakers of two varieties cannot, in fact, understand each other very well, but the two are still considered varieties of the same language. In other cases, the linguistic differences between two varieties can be fairly small and the speakers *can* understand each other, but the two are nevertheless called distinct languages for political, social, or geographic reasons. This is the case for speakers of Swedish and Norwegian, Macedonian and Bulgarian, Malaysian and Indonesian—each is considered a different language because they are spoken in different countries and the speakers’ sense of identity is partly defined by their language. Some groups of people may go to great lengths to distinguish themselves from their linguistic relatives across a border; for instance, Serbs and Croats can understand each other perfectly well but consider their languages distinct and even use different writing systems. (The Eastern Orthodox Serbs use the Cyrillic alphabet, while the Roman Catholic Croats use the Latin alphabet.) Other groups use the writing system to help unite them. In China, more than a billion people speak at least seven mutually unintelligible varieties of Chinese; thus, the varieties could be considered different languages. Speakers of Cantonese, for example, cannot understand speakers of Mandarin unless they learn it as a separate language, and vice versa. However, because the people are in a single nation and because they use a single writing system, speakers consider all the varieties to be Chinese.

Many varieties of language fall somewhere in the middle of a language–dialect continuum, and only time will determine whether they land more firmly in the language camp or the dialect-of-a-language camp. We must keep in mind that every language variety is always changing, so the difficulty we have in classifying some is usually a result of their youth and continually changing forms.

## Universal Grammar

We’ve seen that grammar involves the complex interplay of prescriptive grammar and descriptive grammar and that there is some overlap between the two. In the end, however, we all acquire a complex grammatical system, regardless of how and where we are raised. This suggests that we all tackle language acquisition with the same basic cognitive hardwiring to accomplish that task. Think about it—if we weren’t predisposed to acquire this complex grammatical system, then we would have to learn it consciously. If this were the case, we’d expect to find a great deal of variation across cultures and individual speakers in how they learn language, but this is not the case (as you’ll see in more detail in Chapter 2).

LINGUISTICS  
IN THE NEWS

## The Language Blog and Eggcorns

**T**he Language Log, a blog created in 2003 by professional linguists Mark Liberman and Geoff Pullum, has a few thousand daily visitors and is one of the most popular language sites on the Internet. The blog even made national news as the subject of a *New York Times* article by Michael Erard. As Erard observes, much of the commentary on The Language Log is devoted to debunking myths about language by countering them with linguistic fact, often with a “healthy dose of subversive humor.” The posts do much to undermine the image of linguists as “finger-wagging eggheads” and address a range of issues about language. Titles of some of the posts are “No word for sex,” “If wine and stew can always,

why can’t toast?” “Stupid, contentless political blather,” “Ray Charles, America, and the subjunctive,” “Latte lingo: Raising a pint at Starbucks,” and “Tighty-whities: The semantics.”

The blog is also the birthplace of the term *eggcorn*, a word or phrase erroneously used in place of another word or phrase. Crucially, eggcorns make sense, often more than the original words. So, some examples of authentic eggcorns are *all intensive purposes* instead of *all intents and purposes*, and *cut to the cheese* for *cut to the chase*. However, spelling errors such as *they’re* for *there* don’t qualify as eggcorns (and the eggcorn *eggcorn* only works for you if you pronounce the initial vowel in both *eggcorn* and *acorn* the same way).

*Eggcorn* itself comes from (logically) misspelling *acorn*; an acorn is shaped like an egg and is the seed of an oak tree and therefore cornlike, right? There is even (now, thanks to Language Log) an entire site devoted to the discussion and cataloguing of eggcorns, called The Eggcorn Database, and as of September 2010, *eggcorn* appears in *Oxford English Dictionary*.

For more information

<http://eggcorns.lascribe.net/about/>

<http://languageblog.ldc.upenn.edu/nll/>

[http://www.nytimes.com/2006/06/20/science/20lang.html?\\_r=1&scp=1&sq=geoff+pullum&st=nyt&oref=slogin](http://www.nytimes.com/2006/06/20/science/20lang.html?_r=1&scp=1&sq=geoff+pullum&st=nyt&oref=slogin)

<http://oed.com/news/updates/newwords1009.html>

**Universal Grammar (UG)** the set of linguistic rules common to all languages; hypothesized to be part of human cognition

So, if we are all hardwired in some way to acquire language, what is the nature of this hardwiring? The study of descriptive grammar provides insights into this question because it helps us understand the core grammatical rules that we use to produce and understand language. These core grammatical rules must have similar properties across languages, forming a kind of basic grammatical “blueprint.” These core properties make up what linguists refer to as **Universal Grammar (UG)**. One of the goals of modern linguistics is to study languages in order to learn more about what they have in common and to learn more about UG.

For example, all languages seem to combine subjects and predicates to form larger units, clauses. Word order within the clause, however, can differ across languages. The two most common word orders in the world’s languages are the following:

Subject	Verb	Object (SVO, as in English)
The cat	ate	the rat

Subject	Object	Verb (SOV, as in Japanese)
Nekoga	nezumio	tabeta
Cat	rat	ate

It seems to be a principle of Universal Grammar that clauses in all languages have subjects, though languages may differ in how the subject is expressed. In some languages, clauses can have a subject that is pronounced; in others, the subject can be unpronounced but clearly interpreted. Such languages are called *null subject languages*. Italian, for example, is a null subject language.

Isabella non vuole mangiare. (subject pronounced)

Isabella not want to eat

‘Isabella does not want to eat’

Non vuole mangiare. (subject not pronounced)

not want to eat

‘[She/he] does not want to eat.’

French is not a null subject language, and neither is English, so such sentences are ungrammatical in those languages.

There are many more examples of possible principles of Universal Grammar, and much current work in linguistics is devoted to discovering, through the study of what seem like differences among languages, the universal principles that all languages share.

## Parameters

As you can see from the examples of principles of Universal Grammar, each principle can be characterized in binary terms: languages are most likely SVO or SOV, and languages either allow null subjects or they don’t. Linguists have found evidence that basic universal principles can be defined more accurately as **linguistic parameters**. We can think of a parameter as a metaphorical on–off switch. We can account for certain facts about the differences between languages by proposing that in one language a parameter might be set “on” and in the other, “off.” This means that the differences among languages, which seem dramatic, are really fairly trivial. Whether a language has SVO or SOV order is a possible parameter: in English, this parameter is set to “on” (and the language is SVO); in Japanese, it is set to “off,” and the language is SOV. The same goes for null subjects; a language can have the null subject parameter set either to “on” (e.g., Italian) or to “off” (e.g., English and French).

The notion of such a setting makes the language acquisition task of the child much simpler. The difference between acquiring English and acquiring Japanese or Italian boils down to figuring out how parameters are set.

**linguistic parameters** binary (on–off) settings of universal grammatical principles proposed to account for differences among languages



All languages also appear to share these universal principles:

- They all have subjects and predicates.
- They all have nouns and verbs.
- They all use a subset of sounds from a much wider possible group of sounds humans make that could be used for language.
- They all have similar ways of categorizing meaning distinctions.

The study of which aspects of languages are universal principles and which are parameterized variations is the topic of a great deal of current research.

## Sign Language Grammar

We've noted that sign languages are full linguistic systems with grammar. They differ from spoken language only in modality, the medium by which the language is produced. The study of sign languages provides important insights into UG and parameters and provides important evidence for what is common among all languages of the world.

We mentioned that sign languages exhibit all of the design features of spoken languages. Although some signs in American Sign Language (ASL) are nonarbitrary (the pronoun *I* is indicated by pointing at oneself, for example), most signs are arbitrary, without an obvious logical connection to meaning. (See Figure 1.1.) Sign languages therefore have the same features of arbitrariness and semanticity as spoken languages.

Sign languages such as ASL have complex syntax, morphology, and semantics, and the equivalent of phonology (a system of *primes*, including hand shape, location of sign to the body, and motion of sign to or from the

**Figure 1.1** American Sign Language for *eat* is iconic, but the sign for *mistake* has no obvious connection to the meaning of the word and is thus arbitrary.

Source: From *A Basic Course in American Sign Language* by Tom Humphries, Carol Padden, and Terrence J. O'Rourke (1994). Used by permission of the authors.



## hwæt!

Gallaudet University is the only college in the world where every program is designed for deaf and hard-of-hearing students.

body). Sign languages therefore have discreteness, productivity, and duality of patterning, just as spoken languages do.

Sign languages also have displacement; signers can easily communicate about things in the past, present, or future. Deaf children even acquire sign languages at basically the same rate as hearing children acquire spoken ones; sign languages, like spoken languages, have different varieties (there are many different sign languages, and each has various dialects); and sign languages change over time. Sign languages also provide us with additional evidence for parameters. For example, linguist Diane Lillo-Martin has shown that ASL is a null subject language much like Italian, Hindi, and Japanese (Lillo-Martin 1991).

### Sign Language versus Body Language

Sign language differs quite dramatically from what we call body language—the physical gestures we make, such as smiling, waving, winking, crossing our arms, or clapping. Although these motions and gestures convey meaning and might be argued to be arbitrary and to express semanticity, we don't combine different gestures and motions to create novel "utterances." Body language has no grammar (so there is no duality of patterning or productivity). There is no displacement; a wave or a handshake is just that, an expression of greeting or leave-taking, in the moment. Moreover, much body language is instinctive (smiling, for example, and crying) and stimulus bound, as in other species. Recall that vervet monkeys, for example, produce certain calls only in the presence of a predator,

## Language Alive!

### Sign Language Diversity

Many of you are aware of and may be signers of American Sign Language, but you might not know that there are many different sign languages around the world and that sign languages have different dialects. Sign languages are full-fledged linguistic systems separate from spoken languages. *Ethnologue*, a well-known compendium of world languages (with both print and web versions: see <http://www.ethnologue.com/>) lists 121 sign languages around the world. Sign languages are different from signed versions of spoken languages, also called *manually coded systems*. One such coded system is Signed Exact English (SEE), which is a sign system designed to visually represent English syntax and vocabulary as closely as possible, unlike American Sign Language, which has a grammar entirely different from English (and thus from SEE). Teaching SEE is somewhat controversial but is usually intended as a bridge to help ASL signers learn standard written English.

and Rico the border collie is responding to stimuli when he retrieves the toy associated with a particular name. So, though body language (also called *nonverbal behavior*) is highly expressive, it does not have the same structure or features as spoken or signed languages.

## RPE 1.11

## The Scientific Study of Language

So far, much of our discussion has focused on the question, ‘What is language?’ or more specifically, ‘What is it that we know about language?’ Here are some of the basic facts we’ve learned about language.

- We all have unconscious knowledge of a linguistic rule system.
- Languages exist independent of writing systems.
- All languages have grammar (morphology, syntax, semantics, phonetics, and phonology).
- All languages have the same expressive power.
- All children acquire language if exposed to it, without instruction.
- All languages change over time, no matter how hard we try to stop that change.
- A language is really a continuum of language varieties.
- All languages have a common set of basic grammatical properties (Universal Grammar), and some may be parameterized.

The properties of language listed here are relatively recent discoveries and are the result of subjecting language, like other natural phenomena, to rigorous scientific analysis, or the **scientific method**. As in physics or chemistry, language scientists examine data, form hypotheses about the data, test those hypotheses against additional data, and formulate theories, or collections of hypotheses, that can be tested against competing theories. (We talk more about how to study language scientifically throughout the book, and you will have numerous opportunities to be a language scientist yourself.) **Linguistics**, the scientific study of language, is informed by a long history of the study of grammar, and many of the ideas central to current linguistic theory go back to ancient times. Though many of you have heard the term *linguist*, your definition of this term might not be ‘language scientist’. You probably think of a linguist as someone who speaks many languages or someone who is a professional translator (a linguist in the U.S. military, for example). Most people are unaware of what linguistics is and of what linguists do, partly because the field of linguistics is so young and also because the scientific study of language represents a significant departure from better-known ways in which language has been studied in the past.

**scientific method** formation of hypotheses that explain data and the testing of those hypotheses against further data

**linguistics** the scientific study of language

**generative grammar** system of grammatical rules that allow speakers to create possible sentences in a language

## Noam Chomsky and Generative Grammar

In 1957, graduate student Noam Chomsky wrote a short book called *Syntactic Structures*. In so doing, he introduced **generative grammar**, now the most

visible linguistic theory in the world. In *Syntactic Structures*, Chomsky outlined a theory of grammar based on questions about language that were very different from those asked by the scholars before him. Chomsky sought to explain what underlies the human ability to speak and understand language. He wondered what makes up a human language and whether we can construct theories about linguistic systems that can be scientifically tested (Chomsky 1957).

Chomsky's theory of grammar is called *generative* because it is designed to describe a precise and finite set of rules that generates (or has as its output) the possible sentences in a language. Mathematical operations such as division and multiplication are also generative; though many of you had to memorize multiplication tables in school, what you also learned was how to multiply, and the knowledge of that operation allows you (now) to multiply any numbers you want to. We can think of generative grammar in the same way; we don't memorize all the sentences in a language in order to speak it; rather, we learn or acquire a system of rules that allow us to produce and understand the possible sentences in the language. Chomsky proposed that some of these generative rules might also be grounded in Universal Grammar and thus be common to all languages.

Chomsky's approach to language was an enormous departure from the thinking of the time, and this is why Chomsky's influence on the study of

### Did You Know...?



#### Noam Chomsky

No book on modern linguistics would be complete without mention of Noam Chomsky, the best-known linguist in the world. Chomsky was born December 2, 1928, in Philadelphia. His father, William Chomsky, was an eminent teacher and scholar of Hebrew who introduced his son to historical linguistics. Chomsky continued his education at the University of Pennsylvania, where he studied linguistics, mathematics, and philosophy. He earned his Ph.D. from the University of Pennsylvania, though much of his research was done at Harvard between 1951 and 1955. Since then, Chomsky has taught linguistics at the Massachusetts Institute of Technology and is now Institute Professor Emeritus of Linguistics there. Chomsky is also famous for his left-wing political activism and his critique of American foreign policy. He is the author of numerous books and articles on linguistics and on politics. According to the *1992 Arts and Humanities Citation Index*, Chomsky was cited as a source more often than any other living scholar from 1980 to 1992. He is the eighth most-cited scholar in any time period. Chomsky's 1959 review of psychologist B. F. Skinner's book *Verbal Behavior* was an aggressive challenge—an attack, really—that changed the whole approach to the study of language and contributed to what has been called the “cognitive revolution” in psychology.



# hwæt!

Noam Chomsky's parents spoke Yiddish and his father, William Chomsky, was a Hebrew scholar from Ukraine.

language is sometimes referred to as the “Chomskyan revolution.” In his view, in order to answer the question, What is a language? it is necessary to study language from the inside out, as a system, rather than as a corpus, a list of words and sentences in the language. For Chomsky, the most interesting question to ask about language was, ‘What is it that we know about language in order to speak it and understand it?’

## Influences on Modern Linguistics

Scientific theories don’t crop up overnight; they grow out of research and ideas that precede and even compete with them. The study of language has a rich intellectual history that helped set the stage for the Chomskyan revolution. Chomsky’s key ideas about language can be traced back to the thinking of the eighteenth-century rationalist philosophers of the Enlightenment and to the work of the great Swiss linguist Ferdinand de Saussure and other scholars in the structuralist tradition, the movement that examined how the elements of language related to each other in the present (synchronically) rather than comparing present forms to past forms (diachronically).

### Rationalism and Empiricism

#### rationalism

philosophy based on the idea that we use innate knowledge, or reason, to make sense of the world

**Rationalism** is a philosophy based on the ideas that humans make sense of the world through reason and that reason provides the means of acquiring knowledge. Rationalists argue that in principle all knowledge can be gained through the use of reason. Much of the work that led to this hypothesis was based on geometry; rationalists hypothesize that from knowledge of the axioms of geometry one can derive much other mathematical knowledge. Prominent rationalist philosophers include René Descartes, Gottfried Leibniz, and Benedict Spinoza. An opposing (and also overlapping) school of thought, **empiricism**, is based on the idea that humans learn through experience rather than reason. Prominent empiricist philosophers include John Locke, Thomas Hobbes, and David Hume.

#### empiricism

philosophy based on the idea that we gain knowledge not through reason but through experience and that the mind starts out as a blank slate

Chomsky proposed a rationalist approach to language, arguing that humans (and not other species) are endowed with the biological capability to acquire the rules and principles that allow us to produce and understand language. He argued, in particular, that evidence from child language acquisition suggests that what speakers know about language cannot be learned simply from experience. Chomsky’s ideas were supported by other work at the time. Neuropsychologist Eric Lenneberg argued in his book *Biological Foundations of Language*, published in 1967, that humans are predisposed to acquire language in the same way that behaviors emerge in other species. Lenneberg compared the emergence of human language to the emergence of eyesight in cats or flight in birds, which, he argued, could only be explained by innate biological capabilities. We talk more about Lenneberg’s work and the innateness of language in Chapter 2.

## Structural Linguistics

Another important influence on modern linguistics was the work of Ferdinand de Saussure (1857–1913). Saussure’s work is now known as **structural linguistics**. Saussure’s famous *Course in General Linguistics*, based on his students’ lecture notes, was published in 1916. The central idea is that language is a structural system—an idea that still holds today.

Saussure focused on the linguistic **signifier**, a spoken, written, or signed form, and the **signified**, the concept, idea, or meaning of the signifier. The linguistic **sign** is the link that connects sound and idea and is abstract rather than concrete. The connection between signifier and signified is also arbitrary (except, in his framework, for onomatopoeia). Saussure argued that languages were complete systems made up of interconnected relationships among signs.

Key to his theory was the distinction between **langue** and **parole** (French words for ‘language’ and ‘speech’, respectively). *Langue* is the set of organizing principles of signs, including rules of combination, and *parole* is the physical utterance itself, the use of a sign or a set of signs. *Parole* is only the manifestation of *langue*.

We see Saussure’s influence in Chomsky’s distinction between **linguistic competence** and **linguistic performance**. In Chomsky’s theory, our linguistic competence is our unconscious knowledge of language and is similar in some ways to Saussure’s concept of *langue*, the organizing principles of a language. What we actually produce as utterances is similar to Saussure’s *parole* and is called linguistic performance. The difference between linguistic competence and linguistic performance can be illustrated by slips of the tongue, such as “noble tons of soil” for “noble sons of toil.” Uttering such a slip doesn’t mean that we don’t know English but rather that we’ve simply made a mistake because we were tired, distracted, or whatever. Such “errors” also aren’t evidence that you (assuming you are a native speaker) are a poor English speaker or that you don’t know English as well as someone else does. It means that linguistic performance is different from linguistic competence. When we say that someone is a better speaker than someone else (Martin Luther King Jr., for example, was a terrific orator, much better than you might be), these judgments tell us about performance, not competence. Native speakers of a language, whether they are famous public speakers or not, don’t know the language any better than any other speaker in terms of linguistic competence.

That we attach positive value to speakers we characterize as well spoken or articulate shows that social attitudes about language are not necessarily consistent with linguistic fact. Such labels illustrate how we value certain types of linguistic performance over others. The scientific study of language tells us otherwise; none of us “knows” the language

**structural linguistics** study of the relationship between signifier and signified and of how signs get their meanings from structure

**signifier** a spoken or signed word or a word on a page

**signified** the concept, idea, or meaning of the signifier

**sign** the abstract link that connects sound and idea

**langue** the set of organizing principles of signs, including rules of combination

**parole** the physical utterance itself; the use of a sign or a set of signs

**linguistic competence** unconscious knowledge of grammar that allows us to produce and understand a language

**linguistic performance** the language we actually produce, including slips of the tongue and other missteps

## hwæt!

Anthropologist Claude Lévi-Strauss (1908–2009) applied Saussure’s structural linguistics to the study of culture, arguing for definitions of “family” beyond the traditional father, mother, children structure.

better than another, and such value judgments are just that: opinions based on our social perceptions and attitudes. Although such labels may seem innocuous enough, attaching social values to language use often leads to linguistic discrimination and even to linguistic “profiling.” Such social attitudes about language may make someone less likely to rent an apartment to a speaker of a variety of English that he or she thinks of as lazy, and such negative perceptions based on language may keep someone from getting hired, being considered a competent employee, or even being perceived as a credible witness in court. A better understanding of how language works can

help us recognize and challenge such discriminatory practices.

RPE 1.13

## Linguistics Today

Now, linguistics is firmly situated as its own field. Linguistics departments have emerged in universities around the world, increasing in size and number nearly every year. Linguistics is also found in other areas of study, including philosophy, anthropology, computer science, psychology, and speech pathology. Linguistics is becoming more and more central to the study of language and literature in English departments and to the study of language acquisition, learning, and teaching in modern languages departments (sometimes called foreign or world languages departments). And since Chomsky came on the scene, other theories of grammar have emerged, some generative and some not. Some generative theories other than the principles and parameter or transformational grammar introduced

Table 1.1 Subfields of Linguistics

- **Grammar** The study of phonetics, phonology, semantics, syntax, and morphology
- **Pragmatics** The study of language use in context, including rules of conversation and politeness conventions
- **Sociolinguistics** The study of how social factors—including class, race, and ethnicity—influence language
- **Neurolinguistics** The study of language and the brain, how brain damage (aphasia) affects language, and the location of language centers in the brain
- **Psycholinguistics** The study of how we acquire our first language, how we acquire second languages, and how we produce and understand sentences
- **Computational linguistics** The study of artificial languages, computer programming, and modeling of natural language by computers, including voice production and recognition
- **Historical linguistics** The study of language change over time, including the study of language families and relationships among the world’s languages
- **Anthropological linguistics** The study of language and culture, including the study of kinship terms and how language shapes cultural identity



here include categorical grammar, lexical functional grammar, head-driven phrase structure grammar, and relational grammar. Some nongenerative theories include cognitive grammar and functional grammar.

As you'll see by the number of topics covered in this book, linguists study a wide range of aspects of language within a range of theoretical frameworks to learn more about how language works and how we use it. Table 1.1 shows some of the subfields of linguistics.

Throughout this book, you will learn how language is studied across these different subfields. In the course of the discussion, we will pique your interest with related facts and commentaries about language in features called "Language Alive!" and "Did You Know . . . ?" Features called "Hwæt!," with interesting tidbits about language and linguistics, are also sprinkled throughout the book. In each chapter, we highlight some way in which linguistics is relevant in everyday occupations ("Accent on")

and how it crops up in the public eye from time to time ("Linguistics in the News"). As you'll see, linguistics is everywhere and indeed for everyone.

hwæt!

Founded in the mid-1930s, the Department of Linguistics at the University of Chicago is the oldest linguistics department in the United States.

## Accent on the Linguistic Society of America



The largest professional organization of linguists in the United States, the Linguistic Society of America (LSA), was founded in 1924 and now has nearly 6,000 members. The LSA publishes the journal *Language* and holds annual meetings at which linguists from all over the world present papers; attend symposia, workshops, and invited lectures; and share ideas about the scientific study

of language. A number of subcommittees of the LSA convene during the annual meeting, including the Committee on the Status of Women in Linguistics, the Undergraduate Program Advisory Committee, the Committee on Social and Political Concerns, the Committee on Language in the School Curriculum, and the Committee on Endangered Languages, among others.

Other important national linguistics organizations typically hold their annual meetings alongside the LSA annual meeting. These include the American Dialect Society, the American Name Society, the North American Association for the History of Language Sciences, the Society for Pidgin and Creole Linguistics, and the Society for the Study of the Indigenous Languages of the Americas.

The LSA also hosts summer linguistics institutes for graduate and undergraduate students and is committed to educating the general public about the science of language. Another



important function of the society is as a “linguistic watchdog” on press reports and city, state, and federal policies that concern language and languages in the United States. The LSA has issued statements and resolutions on language rights, the English-only movement, bilingual education, and Ebonics and promotes the revitalization of endangered languages both inside and outside of the United States.

The LSA website is full of information about the field of linguistics, what linguists do, and how to become a linguist yourself. The site provides detailed information on the many areas of study in the field (subfields of linguistics to which we devote chapters in this book), as well as information on linguistics programs and departments across the United States and Canada and on careers in linguistics.

Though you may think that being a linguist limits you to being a linguistics professor in a university, this is not at all the case. Some of the many careers that a background in linguistics prepares you to pursue include teaching foreign languages; translating or interpreting; working in the computer industry or for a product naming company; working on a dictionary (becoming a lexicographer); doing fieldwork and documenting languages of the world; working in publishing, testing, and technical writing; being a dialect coach on a movie set; and many, many more.

*For more information*

Linguistic Society of America website, <http://www.lsadc.org/index.cfm>

The Linguist List, <http://www.linguistlist.org/>

## Summary

In this chapter, we’ve taken a close look at language, how to define it, and how to study it. We’ve found that it is one thing to ask, ‘What is a language?’ and quite another to ask, ‘What do we know about language?’ This latter question forms the core of the field of linguistics, the scientific study of language. Research in linguistics attempts to discover and describe the grammatical system we use to produce and understand language beginning when we are very young. That language acquisition proceeds fairly uniformly in all children who are exposed to language suggests that we come to the language acquisition task cognitively set up to do it, hardwired with a set of core grammatical rules and principles called Universal Grammar. The language acquisition task may be made even easier if certain grammatical principles and rules are parameterized, restricting the number of options available to the child. In the following chapter, we explore language acquisition in much more detail, and we investigate other evidence for our linguistic hardwiring based on studies of language and the brain.

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## Review, Practice, and Explore

### RPE 1.1 Onomatopoeia and Arbitrariness

One of Hockett’s design features of language is *arbitrariness*. Arbitrary signs or symbols have no connection to what they represent. In language, the connection between words and meanings is arbitrary, which is illustrated by the fact that different languages have different words for the same concept (‘horse’ is *cheval* in French and *Pferd* in German). What about onomatopoeia? Think about words like *buzz* and *woof*. Is the connection between these words arbitrary or not? Look up some examples from other languages. What do such examples tell you about onomatopoeia and arbitrariness?

**RPE** 1.2 Sign Systems

Investigate some of the different sign systems that we use other than language. Examples are traffic signs, Morse code, and the hand signals referees and umpires make at sports events. These systems can sometimes be quite complex. What design features do they have, and how are they similar to or different from the human language system?

**RPE** 1.3 Prairie Dog Language

Researcher Con Slobodchikoff of Northern Arizona University has studied prairie dogs for more than twenty years and has concluded that their communication system has many of the same features as human language. According to Slobodchikoff (1998), prairie dogs have different barks (“nouns”) for different predators, and they combine these “words” with other sounds, or “modifiers,” that indicate size, color, and other features. He also claims that prairie dogs coin new “words” by assigning new barks to new objects or animals in their environment. Prairie dogs, he argues, have words for coyotes, skunks, and badgers, as well as for such non-predators as deer, elk, cows, and even for “the man with the yellow coat.” Investigate Slobodchikoff’s work on prairie dogs and determine which of Hockett’s design features prairie dogs seem to possess and which they don’t. (See <http://www.animallanguageinstitute.net/AboutUs/tabid/64/Default.aspx>)

**RPE** 1.4 Animal Communication Systems

Investigate the communication system of a species other than one belonging to the primates. Much research exists on the systems used by dolphins and whales, different varieties of birds, bees, wolves and other canines, and so forth. Discuss which of the design features the system exhibits and how it is similar to and different from human language.

**RPE** 1.5 Primate Experiments

Conduct some research on the attempts to teach primates communication systems, and discuss the ways in which they challenge Hockett’s design features. The most debate centers on whether primates can recombine symbols to create new expressions (duality of patterning) and whether they can acquire the system from other primates. Here are the primary primates with the names of the primary researchers: Washoe (Gardner, Fouts), Nim Chimsky (Terrace), Kanzi (Savage-Rumbaugh), Koko (Patterson), Lana (Rumbaugh), and Sarah (Premack).

**RPE** 1.6 What Do You Mean by *Grammar*?

As we’ve pointed out in the chapter, the term *grammar* has many meanings. Explain the distinct meanings of *grammar* in the following sentences. If you can think of others, discuss them as well. You may use a dictionary if you like, but do not rely on it alone.

- a. I better watch my grammar around you!
- b. Please proofread your paper for grammar and style.
- c. I’m taking a class on Spanish grammar.
- d. There have been three grammars written on the language Quechua.
- e. Our innate capacity for the grammar of a language is quite amazing.

**RPE 1.7** Is That Ungrammatical?

Which of the following sentences are ungrammatical in terms of your own *descriptive* grammar and which are ungrammatical in terms of *prescriptive* grammar? Briefly explain why you analyzed each sentence the way you did.

- a. Rosie a beautiful pony is.
- b. Maurice and me are going to the movies tonight.
- c. John put the book.
- d. All the tulips are coming up in the garden.
- e. The all tulips are coming up in the garden.
- f. Purple big pillows were on her bed.
- g. I don't have no idea.
- h. Who did you talk to?
- i. I saw a cat climb up tree.
- j. I have drank six glasses of water in a row.

**RPE 1.8** Correct according to *Who* or *Whom*?

All of us can probably remember when someone corrected our language, and many of us can also probably think of examples where we have corrected someone else's language. Sometimes this correction can lead to modification; we adopt the "new" form in order to be more socially acceptable. What is a rule of grammar that you have learned is the correct or proper way to say something but that you do not always (or ever) use in speaking? For example, you may have learned that *It's me* is incorrect, and the correct form is *It is I*; however, you may use *me* anyway, and *I* sounds odd to you. Have you modified your speech to say *It is I*? Who corrected you? How would you respond to someone who tells you that your way of speaking is wrong? Write a short paragraph on the language authorities in your life and what modifications you've made (or not made).

**RPE 1.9** Language in Different Places

The following sentences are grammatical in some variety of English but perhaps not in yours. Do you recognize each as English? Why or why not?

- a. He is joking only. (Indian English)
- b. Those cats were just a-playing. (Appalachian [American] English)
- c. They might could make a deal. (Southeastern American English)
- d. Ought she to walk the dog soon? (some British English varieties)
- e. They have made a good life for themselves. (various varieties)
- f. This car needs washed. (various varieties)
- g. We've already boughten some bread. (various varieties)
- h. The child has learnt the alphabet song. (some British English varieties)
- i. She done told you. (various varieties)
- j. They be late. (African American English)
- k. We happy. (various varieties)



**RPE 1.10** Language in Different Times

Below are some examples of varieties of English that are no longer spoken but are the ancestors of Present-Day English. Do you recognize each variety as English? Why or why not? Which sentences are “older” than the others? Try to put them in order, and explain why you ordered them the way you did. (An answer key is at the end of this “Review, Practice, and Explore” section.)

- a. Untill you had gave me an account of what you had Cutt . . .
- b. That I ne knew therwith thy nycetee  
*‘That I knew not thereby your foolishness’*
- c. Hiericho seo burh wæs mid weallum ymbtrymed & fæste belocen  
*‘Jericho the city was with walls surrounded and firmly locked’*
- d. Cecile answerede, “O nyce creature!”  
*‘Cecile answered, O foolish creature!’*
- e. Thou sydest no word syn thou spak to me  
*‘You said no word since you spoke to me’*
- f. I have thoughts of what you Said to me Concerning them fish.
- g. I wonder you had not wrote to me.
- h. For ðes folces tocyme, and hi ne dorston ut faran ne in faran  
*‘Against the people’s arrival, and they no dared out go nor in go’*

**RPE 1.11** Sign Language versus Body Language

Find at least four examples of arbitrary signs in American Sign Language or another sign language. Also find a few examples of nonarbitrary signs. What are some grammatical features of the sign language you are researching? How do your examples illustrate the difference between sign language and body language?

**RPE 1.12** Linguistic Competence and Linguistic Performance

Record 2 to 5 minutes of casual conversation among friends or family members. (You must by law have their permission to do so. However, try to make the recording as unobtrusive as possible—you don’t want their speech to be stilted or formal as a result of the taping. So tell them you’re taping them but then try to get them to forget about it.) Now transcribe the tape, writing down everything that was said, including “ums” and “ahs,” false starts, and other features. (Please leave out names and other identifying characteristics.) You will likely find that the speaker very rarely uses complete sentences. What does this simple exercise tell you about the distinction between competence and performance?

**RPE 1.13** Language Myths and Stereotypes

Learning more about language allows us to recognize misperceptions about language when we hear them. While some “language myths” are rather benign, some can be very discriminatory. Based on what you’ve learned in this chapter, choose four of the following language myths (none of the statements below is true) and explain why they are misperceptions. Why do you think such misperceptions persist? Try to explain.

- a. Some languages have no grammar.
- b. French is much more romantic than German.
- c. English descended from Latin.
- d. Aborigines speak a primitive language.
- e. Teenagers are ruining the English language.
- f. Children are taught language by their parents.
- g. We'd speak better English if schools would teach more grammar.
- i. Some kids learn language better than others.
- j. People who use double negatives are just lazy.

*Answers to Exercise 10*

Old English (from the OE Heptateuch): c, h

Middle English (from Chaucer's *Second Nun's Tale*): b, d, e

Early Modern English: a, f, g





## Chapter at a Glance

# The Human Capacity for Language

## Key Concepts

- Children figure out complex rules of grammar just from hearing (or seeing, in the case of sign language) language around them.
- Evidence suggests that language acquisition proceeds in the same stages, over the same period of time, across languages.
- Second language acquisition differs from first language acquisition and from bilingualism, but all provide evidence for Universal Grammar.
- Universal characteristics of pidgins suggest that all languages share one blueprint.
- Language seems to be in some ways separate from other cognitive abilities, as the language capacity of linguistic savants indicates.
- Language may be lateralized on the left side of the brain, and specific areas may be responsible for specific linguistic tasks.

## Did You Know . . . ?

How Do You Study an Infant?  
 Baby Talk and Parentese  
 What about *Baby Einstein*?  
 Poor Phineas Gage

## Language Alive! One Wug and Two . . . Wugs?

Hardwiring and Order of Acquisition

## Linguistics in the News A Gene for Language?

## Accent on Clinical Linguistics

### Our Capacity to Acquire Language

What Children's "Mistakes" Tell Us  
 Stages of First Language Acquisition  
 A Critical Period for Language Acquisition?

### Second Language Acquisition

Is It Learning or Acquisition?  
 Interlanguage Grammar  
 Social Aspects of Second Language Acquisition  
 Second Language Acquisition and Universal Grammar

### Two Native Languages: Bilingualism

Misperceptions about Bilingualism

### Our Capacity to Create Language

Pidgins and Creoles

### Language and the Brain

Language Intelligence?  
 A Language Center in the Brain?  
 More Evidence for Lateralization

### Summary

### Sources and Resources

### Review, Practice, and Explore



*When we study human language, we are approaching what some might call the “human essence,” the distinctive qualities of mind that are, so far as we know, unique to man . . .*

—NOAM CHOMSKY, *LANGUAGE AND MIND*

#### psycholinguistics

study of how we acquire, produce, and understand language

The previous chapter outlined some of what we can learn by studying language scientifically. It presented some evidence that humans are uniquely adapted to acquire language when exposed to it and that our unconscious knowledge of our own linguistic system (syntax, phonetics and phonology, morphology, and semantics) allows us to produce and understand sentences we’ve never heard before. In this chapter, we will explore in more detail our unconscious knowledge of language—or more specifically, of grammar—and what the scientific study of language tells us about how we think and about how our brains work. We will explore evidence from **psycholinguistics**, the study of the comprehension and production of language and its development in children. We will discuss how we acquire our first language and how this process differs from how we acquire a second or third language. We’ll discuss what it means to be bilingual, or to have more than one first language. We’ll explore evidence from the spontaneous emergence of language, or language genesis, to see what this phenomenon tells us about language acquisition and our unique capacity for language.

#### neurolinguistics

study of the mechanisms of the brain that underlie how we acquire, produce, and understand language

We’ll then investigate how our brains are actually organized for language. We’ll examine evidence from people with cognitive impairments who still develop language normally. We’ll also look at the other side of the coin—people whose language is impaired but who otherwise function relatively normally. We will look at evidence for “language areas” of the brain and how the brain might be *lateralized* for language on the left side. The study of the human brain mechanisms underlying language is called **neurolinguistics**.

## Our Capacity to Acquire Language

Contrary to popular belief, children do not learn language because we teach it to them or because they imitate us. If they did, we would expect a great deal more variation in the rate at which children acquire language and in the degree of acquisition. Some children would simply opt out of the learning process altogether, like, say, opting out of learning to play the piano. But that doesn’t happen. In fact, all children are able to acquire an extremely complicated grammatical system by the time they are 4 or 5 years old, and they all, under normal circumstances, accomplish this

task without being directly taught. Noam Chomsky was first to argue that first language acquisition in human infants proceeds the way it does because we are cognitively predisposed to acquire language. He observed that the input available to children—the language they hear around them—does not provide enough information alone for the child to learn the complex set of grammatical rules needed to produce and understand a language. Much research in the field of first language acquisition supports this **poverty of the stimulus argument**, that children do not receive enough data to acquire language simply from what they hear spoken around them.

**poverty of the stimulus argument**  
position that children do not receive enough data to acquire language simply from what they hear

## What Children's "Mistakes" Tell Us

Children hear speakers stop and start, cough, fail to complete sentences, and trail off—but children seem to tease out the rules of language regardless of this mass of confusing data. The mistakes they make (which, as we'll see, aren't really mistakes at all) tell us that they are experts at the acquisition of linguistic rules, even if those rules don't correspond (yet) to the rules adults use.

## Mouses and Foots: Overgeneralizing Rules

Most of you have probably heard a child say a word that you would never say. For example, children acquiring English routinely produce verbs like *bringed* and *goed* or nouns like *mouses* and *foots*, and they certainly haven't learned these forms from the adults around them. So they aren't imitating adult speech, but they are figuring out grammatical rules, in this case the way to form past-tense verbs and plural nouns. This process of figuring out a grammatical rule and applying it generally is called **overgeneralization**. Children later modify their natural rules of past tense and plural formation to accommodate the exceptions, including *brought*, *went*, *mice*, and *feet*. Moreover, they modify their language only when they're good and ready. Children are fairly impervious to correction, as the following exchange between an adult and a child illustrates:

**overgeneralization**  
application of a grammatical rule more broadly than it is generally applied

Child: Want other one spoon, Daddy.

Father: You mean, you want the other spoon.

Child: Yes, I want other one spoon, please, Daddy.

Father: Can you say "the other spoon"?

Child: Other . . . one . . . spoon.

Father: Say "other."

Child: Other.

Father: "Spoon."

Child. Spoon.

Father: "Other spoon."

Child: Other . . . spoon. Now give me other one spoon?

# Language Alive!

## One *Wug* and Two . . . *Wugs*?

A famous example of overgeneralization is the deceptively simple-looking *wugs* experiment, devised by Jean Berko Gleason (1958). Here's how the experiment went. Children aged 4 through 7 years were shown a drawing and told, "This is a wug."



Then they were shown another drawing and told, "Now there is another one. There are two of them."



They were then led to fill in the blank.

There are two \_\_\_\_\_.

Children invariably responded, as you might expect, with *wugs* as the plural form of *wug*. What this shows, though, is that we do not have to hear words in the plural first in order to learn the plurals; rather, we learn the plural *rule*, namely, add -s to a singular noun, and we can then apply that rule to any new noun we hear.

Wugs are copyrighted by Jean Berko Gleason and reprinted with permission.

## Evidence for Universal Grammar

The evidence for overgeneralization tells us that children formulate grammatical rules when exposed to language, teasing these rules out of the mass of data they hear even when they are very young. Children's acquisition of language also provides us with evidence for Universal Grammar, the set of grammatical rules and principles common to all languages.

In English, we can form questions by putting a question word (such as *who*, *what*, *when*, *which*, etc.) in sentence-initial position.

Who did John see Mary with \_\_\_\_?

Here, we've questioned the object of the preposition *with*. The answer to such a question would be a sentence like the following (where *her friend* is the object of the preposition):

John saw Mary with her friend.

Now, children who have mastered this question rule (which takes some time) can form questions out of any sentence, producing, for example, *Where is the dog?* or *Why can't I go?* And children make many "errors" along the way to acquiring the adult version of this rule; you may have heard a child say something like *Where the dog is?* or *Why I can't go?* because they have yet to develop the adult form of the rule. But here's an error a child *never* makes:

\*Who did John see Mary and \_\_\_?

Compare this question with the preceding one. In the first example, we've questioned the object of the preposition *with*, and the result is a grammatical sentence of English. In the second example, we've questioned part of a *coordinated* phrase, a phrase that is made up of two phrases connected with the conjunction *and*. The result is a sentence that no speaker of English would ever utter.

We won't go into a detailed discussion of the syntactic difference between these two sentences, but the basic point is this: Speakers simply *know* that the question formation rule works in sentences like the first one, with the preposition *with*, but not in sentences like the second, which involve coordination with *and*. Obviously, no one teaches us this kind of complex grammatical concept in school, nor do we learn this kind of thing from our parents. That young children never make this kind of error suggests that they already have the relevant grammatical information in their heads, wired into their brains as part of Universal Grammar.

Now let's look at another "error" involving the rule of question formation we've just introduced. This example is from research done by Stephen Crain, Rosalind Thornton, and Gabriela Tesan (2008) and is captured in a video clip at <http://www.uga.edu/lava/Crain/Crain.html>. Consider the following question, produced (consistently) by a child of about 2 years. (What's odd to adult English speakers is the presence of the second *what*.)

What do you think what's in there?

What do you think what she said?

Several things about these questions are noteworthy. First, the child has never heard questions of this form in the English she is exposed to, yet she routinely produces them (regardless of the researchers' numerous attempts to elicit questions with adult word order). This tells us that the child has certainly formulated a rule of question formation, but it's one that differs from the adult version. That the child doesn't simply modify her grammatical rule to conform to the adult version when she hears adults talk



tells us that children formulate their own versions of grammatical rules and that they don't learn by imitation or through correction. But perhaps the most interesting thing about the child's question rule is that it isn't idiosyncratic at all; her rule conforms to the way questions are formed in German:

*Was denkst du was darin ist?*  
 what thinks you what therein is  
 'What do you think is in there?'

*Was denkst du was sie gesagt hat?*  
 what think you what she said has  
 'What do you think she said?'

So the child's rule is a "possible" question formation rule, but it's just not the English one (yet). This provides evidence for Universal Grammar; the child is acquiring a linguistic rule that conforms to the options available to her via UG.

### Children Don't Learn by Analogy

We have just discussed the notion that humans do not learn language simply by imitation; children produce words and phrases that they have never heard before.

The cat goed out already.  
 The mouses ate the seeds.

So, clearly language is not learned simply through imitation. Some have suggested, though, that children learn by **analogy**, by comparing partially similar forms and by using more general knowledge (rather than innate linguistic knowledge) to acquire language.

This analogy theory of language acquisition looks like a good one at first glance. Children may not have ever heard *goed* or *mouses*, but they have heard plenty of other words that end with those regular endings: past tense *-ed* and plural *-s*. So they simply extend those patterns to apply to all verb and noun forms. If this is how children acquire grammatical rules, it makes sense to think that rather than being equipped with Universal Grammar, they are simply very good at making connections, recognizing patterns, and making extensions. However, this kind of pattern extension breaks down upon closer examination.

Noam Chomsky gives several kinds of examples of analogies that break down in language acquisition. For instance, if we learned the patterns of language by hearing language, recognizing the patterns, and then extending those patterns to new constructions, we would expect to find the following kinds of sentences. Say that a child hears a sentence like this one:

We painted the green chair.

They might also hear a sentence like this one:

We painted the chair green.

**analogy** learning rules and applying them to other similar expressions; learning through comparison

On the basis of hearing sentences like that, the child could infer that the last two words, a noun and an adjective (*chair . . . green*) can be switched (*green . . . chair*), and either order results in a grammatical sentence. So the language learner then takes a sentence with a different verb, such as

We saw the green chair.

and then deduces that the order of the final two words, a noun and an adjective just like in the previous examples, can be switched:

\*We saw the chair green.

This sentence is, of course, not a sentence of English (at least not if we understand *green* as an adjective, as in the other sentences). And neither children nor adults ever make this error or one remotely like it. We'd expect them to, though, if all they are doing is learning by analogy. Rather, it seems that children have some kind of knowledge of linguistic rules, rules that block production of such sentences.

In the following section, we turn to even more evidence that the human mind is specifically designed to approach the task of language acquisition and that it accomplishes much of this task relatively quickly and also at relatively the same rate across languages and cultures. Evidence from the stages of language acquisition provides us with additional evidence for our linguistic hardwiring and for Universal Grammar.

## Stages of First Language Acquisition

In nearly all cases, children's acquisition of language follows a predictable sequence. Linguists study how children of all ages (even before they're born!) acquire sounds, words, and their meanings and how they combine words into sentences. Although children don't all progress through each stage in exactly the same way, it is possible to identify a general progression, beginning with the prelinguistic stage in the earlier months and progressing through what we'll call the *later multiword stage* at about 3 to 4 years old.

### The Prelinguistic Stage: The Early Months

There is evidence that by the time hearing babies exposed to oral language are 2 months old, they can recognize the intonation patterns of their native language. This is perhaps not surprising, given that babies can hear in the womb after around 7 months and are exposed in this way to the sounds of language (and other sounds as well, of course) early on. This may also be why babies seem to be able to produce the intonation patterns of language before they can actually form words. Other studies have shown that babies can distinguish human language sounds from other sounds (car engines, doors slamming, dogs barking). Interestingly, babies during the prelinguistic stage differentiate the sounds of any language from nonlinguistic sounds

regardless of whether that sound occurs in the child's native language. For example, a baby born in the United States to English-speaking parents, exposed only to English, can tell the difference between a sound that does not occur in English (but does occur in, say, Chichewa, a Bantu language of Africa) and nonlinguistic sounds.

### The Babbling Stage: 4 to 8 Months

By about the time they are 6 months old, babies seem to have mastered many of the sounds of their own language, and up until they are about a year old they produce these sounds consistently during what is called the *babbling stage*. All hearing babies capable of vocalization babble, which shows that it is a universal process. Deaf children exposed to signing babble with their hands (their signs are rhythmic and signed consistently in front of the body). Babies in the babbling stage tend to produce the same consonants, no matter what language they are exposed to: /p, b, t, m, d, n, k, g, s, h, w, j/. The consonants /f, v, l, r/ and others are only infrequently produced during this period. Such evidence suggests that even at the babbling stage, babies are predisposed to language.

#### Did You Know...?



#### How Do You Study an Infant?

All kinds of experiments are conducted on infants—those that test perception, cognition, language abilities—but preverbal infant psychology is actually a very difficult thing to study. How can the baby convey what he or she is thinking? Andrew Meltzoff and his colleagues began using a technique in the 1970s for eliciting infants' responses to various stimuli: measuring babies' sucking on a pacifier. When the infants become accustomed to a stimulus, their sucking rate slows down. When a new stimulus is shown, they begin to suck more vigorously again.

### The One-Word Stage: 9 to 18 Months

After about a year, hearing babies recognize the word as the link between sound and meaning. They begin to produce their own words, particularly nouns and verbs, around this time. Between the ages of about 12 and 18 months, they are attempting to produce the fifty or so most common words in their everyday environment. These first words typically show tremendous variability in pronunciation. Some may be adult-like productions, while others may be so distorted that only family members can understand them.

**overextension** use of words to apply to things beyond their actual meaning

**underextension** use of words to apply to things more narrowly than their actual meaning

At this stage, children tend to employ both **overextension**, in which they extend the meanings of words, and **underextension**, in which the meanings are narrower than for adults. An example of overextension is the word *moon* used not only for the moon but also for grapefruit halves, cakes, and the letter *o*. Another example is *candy* used not only for candy but for anything sweet. An example of underextension is use of the word *kitty* for a particular cat but not for other cats. This stage of acquisition is also called the *holophrastic stage*, in which a single word can function as a sentence or proposition. Children during this stage can produce about fifty different words (but understand many more than that), and most of their words are consonant + vowel combinations no matter what language they speak. The meanings conveyed by the single word seem to be more than just labels for an object or action; *ball* might convey something like “I want that ball.” *Juice* means “I want juice.” *Moon* means “I see the moon.”

### The Two-Word Stage: 18 to 24 Months

During the next stage, usually between 18 and 24 months, children seem to go through a ‘naming explosion’, when they grasp the idea that things have names. This process is called *fast mapping* (the same process the border collies Rico and Chaser appear to exhibit, as we discussed in Chapter 1). Children at this stage also begin to combine words into two-word utterances (which are distinguished from two one-word utterances by the intonation patterns). The utterances have fairly consistent word order, and their structure seems to be determined by semantic relationships rather than by syntactic ones as in adult speech. There are very few endings on words to indicate syntactic or morphological relationships. Some examples of speech produced during this two-word stage include the following:

agent + action	mama sleep
action + thing	kick ball
action + location	sit couch
thing + location	kitty bed
possessor + possession	dada boat
thing + attribute	mama big
determiner + thing	my sock

As you can see in the examples, at this stage children speak “telegraphically”; they leave out function words (articles such as *the*, *a*; prepositions such as *in*, *on*; verbs such as *don’t*, *is*) and inflectional endings (such as plural *-s* or past tense *-ed*). They tend to rely on content words, such as nouns, verbs, and adjectives (which convey more meaning, so perhaps this isn’t surprising). Though they seem to be limited in the number of words they can string together in a single phrase, they nevertheless can communicate (with limited vocabulary and syntax) quite expressively, and what children can understand far outstrips their language production at this stage. Deaf babies also go through a comparable stage, producing two-sign combinations during this developmental period.



# Language Alive!

## Hardwiring and Order of Acquisition

Roger Brown, in an in-depth study of children's acquisition of certain *function* words (words with grammatical meanings, such as prepositions and auxiliary verbs, as opposed to *content* words, such as *cat* and *house*) and certain inflectional endings (such as *-ed* and *-s*) found that children acquire these in a particular order. Brown proposed that this order of acquisition provides evidence for linguistic hardwiring because the order is remarkably consistent regardless of the child's circumstances.

1. present progressive (*-ing*)
2. the preposition *in*
3. the preposition *on*
4. plural inflections (*-s*, *-es*)
5. irregular past tense verbs (*went*, *fell*)
6. possessive inflections (*the dog's ball*)
7. uncontractible copula (*is*, *am*, and *are*)
8. articles (*the*, *a*, *an*)
9. past inflections on regular verbs (*-ed*)
10. regular third-person forms (*-s* as in '*Suzi sings*')
11. irregular third-person forms (*has*, *does*)
12. uncontractible auxiliary forms (*did*)
13. contractible copula (*she's happy*, *they're sad*)
14. contractible auxiliary forms (*he's going*)

*For more information*

Brown, R. 1973. *A first language: The early stages*. Cambridge, MA: Harvard University Press.

## The Early Multiword Stage: 24 to 30 Months

We mentioned previously that as children begin to acquire different grammatical rules, they often overgeneralize those rules. We gave the examples of *mouses* and *foots* (and *wugs*) to illustrate the overgeneralization of the rule for forming plurals in English.

Children also begin to acquire more complex syntactic structure and rules at this stage, though their grammatical patterns do not yet approximate those of adult grammar. From around 2 to 4 years, children form questions by placing such question words as *where* and *what* at the front of the sentence (data adapted from Foss & Hakes [1978] and Clark & Clark [1977]):

Where kitty?  
What me think?

Children at this stage rely on intonation to form questions, producing utterances such as these:

That mine?  
See doggie?

Acquisition of negative sentences during this stage also follows a certain pattern. At the one-word stage, children typically simply use *no* or a word such as *allgone* to indicate negation. During this early multiword stage, *no* appears at the beginning of more complex statements:

RPE 2.2

no eat  
no sit down  
no do that

### The Later Multiword Stage: 30 Months and Older

Right around 30 months begins what Steven Pinker (1994) refers to in *The Language Instinct* as “all hell break[ing] loose.” Development is so rapid that it’s hard to distinguish stages, and children begin to produce sentences of varied length and complexity.

During this stage, children begin to use more question words, such as *why* and *how*, and they at first continue to use intonation rather than inversion to form questions:

Why doggie run?  
How she can do that?

Children produce more complex negative structures with *no* or *not* and some auxiliary verbs or modals, such as *don’t* and *can’t*. Interestingly, children acquire auxiliary verbs in negative sentences before positive ones, producing *can’t* and *don’t* before *can* and *do*.

I can’t move it.  
He not tall.  
Mommy no play.  
I don’t know him.

Later, children produce negative sentences with *not* in the position after a wider range of auxiliary verbs, consistent with the rule of adult grammar; auxiliary verbs begin to appear in positive sentences during this stage as well:

I didn’t do it.  
Mommy won’t play.  
I should not go.

And finally, children invert the subject and auxiliary verb in questions, as in adult grammar:

Why did doggie run?  
How can she do that?

Table 2.1 Children's Speech Production

Stage	Approximate Age (mo.)	Typical Patterns
Babbling	5–9	consonant–vowel patterns: <i>ma ma ma, da da da, ba ba ba</i> , etc.
One-word	9–18	single words: 50 or so common words in environment
Two-word	18–24	combinations of words, mini-sentences <i>mommy go, want juice, allgone, no eat</i>
Early multiword	24–30	more complex structure in sentences <i>where doggie? No eat that.</i>
Later multiword	30+	adult-like phonology, morphology, and syntax; still many overgeneralizations ( <i>goed, mouses</i> , etc.)

As they progress through this later multiword stage, children gain command of function words (such as prepositions), coordination (with words such as *and* and *or*), and dependent clauses:

He was stuck and I got him out.  
Look at the train Ursula bought.  
I like to play with something else. (Adapted from Pinker [1994])

There are several ways one could summarize the developmental sequence most children go through in acquiring language, but Table 2.1 shows a common way of describing children's production of speech.

Similar stages and patterns occur in all languages. Children seem to progress through the process of first language acquisition at relatively the same rate and through similar stages regardless of their environment: how much or how little they are spoken to, how much they speak, how many books are read to them, or how much TV they watch.

RPE 2.3

Table 2.2 Characteristics of Biological Behavior

- The behavior emerges before it is necessary.
- Its appearance is not the result of conscious decision.
- Its emergence is not triggered by external events (but the surrounding environment must be appropriate for it to develop adequately).
- Direct teaching and intensive practice have relatively little effect on the behavior.
- There is a regular sequence of milestones as the behavior develops, and these can usually be correlated with age and other aspects of development.
- There is likely to be a critical period for the acquisition of the behavior.

Data from Lenneberg, E. 1967. *Biological foundations of language*. New York: Wiley.

So language, like other biological behaviors, appears to simply emerge in children when they are exposed to it. In his book *Biological Foundations of Language*, published in 1967, neuropsychologist Eric Lenneberg compares the acquisition of language and what he argues are innate abilities in other animals, such as eyesight in cats or flight in birds. You can see from the list of characteristics of such behaviors in Table 2.2 that language acquisition fits in quite well.

## A Critical Period for Language Acquisition?

One common assumption about learning a second language, at home or in school, is that it is easier the younger you are and that after you grow up, learning a second language is much harder. What about first language acquisition?

### Did You Know...?



#### Baby Talk and Parentese

Do you think it matters how your parents talked to you when you were a baby? Can parents help children acquire language or even hinder that process? Do parents talk to children differently across cultures? If they do, and if “parentese” matters, wouldn’t we expect to see differences in rates of language acquisition?

Much research has been done on the role of parents or caregivers in babies’ language acquisition. Here are some of the basic characteristics of this kind of speech.

- Slower, exaggerated articulation, intonation, and stress; higher pitch, pauses
- Restricted, concrete vocabulary with fewer verbs and lots of nouns
- Complete, short sentences
- More commands and questions than declaratives
- Repetitive and focused on here and now—what’s happening in child’s immediate environment

Some people discourage so-called baby talk, believing it may hinder a child’s language development, but in fact using such techniques in speaking to babies and small children may help language acquisition along. Kuhl and colleagues (1997) studied the parentese of native speakers of English, Swedish, and Russian and found that across languages, parentese has a unique acoustic signature that “stretches” vowels, a process that may make vowels more distinct to babies than those they would hear in typical adult speech. Such stretching of vowels, the researchers suggest, may facilitate language acquisition. There may also be a correlation between how rapidly a child acquires auxiliary verbs and the number of questions the child hears (*Is that your kitty?*). But children who do not have the same input will still end up fully acquiring the grammar of the language and therefore are not at a disadvantage.



## Did You Know...?

What about *Baby Einstein*?

In 1997, Julie Aigner-Clark and her husband, Bill Clark, introduced their line of *Baby Einstein* (marketed under the name *Language Nursery*) products to an enthusiastic public. *Baby Einstein* became a multimillion-dollar franchise, which is now owned by The Walt Disney Company. The *Baby Einstein* series is promoted as an educational tool to boost children's knowledge and language skills and includes such titles as *Baby MacDonald* (on agriculture), *Baby Wordsworth*, *Baby Mozart*, *Baby Galileo*, and *Baby da Vinci*. The series has been criticized by the Campaign for a Commercial-Free Childhood, however, for promoting television watching for young children. (The American Academy of Pediatrics recommends no television for children younger than 2 years.) An even more critical study by Frederick Zimmerman and colleagues (2007) concluded that infants aged 8 to 16 months exposed to educational DVDs aimed at them had lower scores on standard language development tests. Older babies studied showed no negative effects from watching DVDs but no positive ones either. But daily reading and storytelling did lead to higher language scores for toddlers. In an interview in *Newsweek*, Zimmerman suggested that the lower verbal scores might be due to the fact that watching DVDs takes the child away from interaction with parents and siblings, all of which facilitates language development.

For more information

Campaign for a Commercial-Free Childhood. <http://www.commercialexploitation.org>.

American Academy of Pediatrics. <http://www.aap.org>.

Interlandi, J. 2007. Learning: Turn it off, baby. *Newsweek*, August 20–27. <http://www.newsweek.com/id/32243>.

**critical period for language acquisition** early childhood to prepuberty; according to some, the best, maybe only, time in which humans can acquire a first language

Is there, as many (including Lenneberg) have argued, a **critical period for language acquisition**, just as there are critical periods for other types of behavior? For example, Banks et al. (1975) found that there appears to be a critical period for the development of a human child's binocular vision (from 1 to 3 years). And the well-known Austrian scientist Konrad Lorenz (1950) argued as early as the 1930s that baby birds form social bonds, *imprinting* on adult birds, during a critical period, after which imprinting becomes impossible (often with disastrous results for the baby bird). Studies have since shown that imprinting is not necessarily restricted, as Lorenz claimed, to a particular developmental phase or critical period (Hoffman 1996). The critical period for language acquisition is somewhat controversial as well. It is also quite difficult to study, given that under normal circumstances, children are not raised isolated from language. Cases of such isolation do exist, and we will discuss a few of them as well as other experiments that provide insights into the critical period for first language acquisition.

## Acquisition and Isolation: Victor and Genie

hwæt!

A 1970 film by François Truffaut called *L'Enfant Sauvage* ("The Wild Child") is based on Itard's work with Victor.

There are some (rather horrifying) cases of children who were deprived of language during their early years and who were never able to fully acquire it. In 1797, a boy who was believed to be about 12 years old was discovered in the woods in Aveyron, France, where he had apparently survived on his own since childhood. The boy, called Victor, ultimately ended up in the care of a young doctor named Jean Marc Itard. Itard worked with Victor for years, carefully documenting his progress. Victor's language remained quite impaired, and Itard made very little progress with him.

Probably the best-known case of a child isolated from language is that of a girl called Genie. She was discovered in 1970 at the age of about 13. She had not been allowed to speak or to be spoken to for about 12 years. Despite subsequent years of direct instruction, she never fully acquired language. Susan Curtiss (1977), the linguist who worked most with Genie, wrote that Genie's utterances remained telegraphic and that what language she did acquire differed greatly from that of normal children.

Because social isolation can result in mental retardation and emotional problems, cases such as Victor's and Genie's are problematic for what they can really offer about the critical period and language acquisition. The fact that neither Victor nor Genie ever acquired language might be due to a number of factors other than lack of language development in the critical period—isolation, abuse, and deprivation among them. Other studies, however, provide us with some interesting insights into the critical period.

## Sign Language Acquisition

Acquisition of sign language can shed additional light on the critical period hypothesis. Deaf children of hearing parents may not be exposed to sign language from birth for a variety of reasons. It may be that they are not diagnosed as deaf right away, or there may be limited opportunities to expose the child to sign language. Studies by Newport (1990) and others show that early exposure to sign language is crucial in order to fully acquire the grammar of the language. It has been found, for example, that the grammar of deaf children who were exposed to sign language after age 13 systematically differs from the grammar of signers exposed to sign language from birth. Although signers in both groups can communicate expressively, those acquiring the language later in life use different verbs of motion and also differ in their use of verb agreement. (For further discussion of a critical period for the acquisition of sign language, see Newman et al. 2002.)

Additional evidence for the critical period for language acquisition comes from Nicaraguan Sign Language, which we discuss later in the chapter. We will also return to the critical period hypothesis when we discuss the anatomy of the brain and what brain development tells us about how easy

or how hard it is to acquire language. But first, we turn to second language acquisition and what this tells us about mind, brain, and language.

## Second Language Acquisition

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Now that you know something about how children acquire their native language, think about how this acquisition process differs from *second language acquisition*, the process by which, for example, you learn another (“foreign”) language in school. You might sit in a classroom for an hour a day and be exposed to the language and have a teacher explain different grammatical rules, and after class you might study some of the grammatical rules you’ve learned, or you may practice speaking the language with some classmates, and so on. This situation is entirely different from the way in which you are exposed to your first language as a child, when you are immersed in your native language.

Let’s suppose you’re an adult, and you travel to another country and are immersed in the language there. You already speak a native language, so how does the process of becoming proficient in this second language proceed? Does your first language help you learn a second language, or does it hinder that process? How do you keep the grammar of each language, the native one and the second one, straight? If you are learning a second language as an adult, your brain is already mature, so do you go through the same developmental stages learning that language as you do acquiring your native language as a child? Let’s look at what the research tells us and what questions it raises about this complex process.

### Is It Learning or Acquisition?

First, should we call this phenomenon we’re talking about second language *learning* or second language *acquisition*? The terminology here is rather controversial and boils down to whether one can gain the same proficiency in a second language as in a first one. This in turn depends on what we mean by *proficiency* and how we define such terms as *fluency* and what it means to be a “native” speaker. Native speaker judgments are not always clear; they do not consistently identify nonnative speakers, and sometimes they identify native speakers as nonnative!

We will use the term *second language acquisition* here, abbreviated SLA, and refer to those acquiring a second language as second language acquirers. Bear in mind that we are not talking here about simultaneous acquisition of two or more languages by children; that’s *bilingualism*, discussed later in the chapter.

### Interlanguage Grammar

As a second language acquirer, you already have a first language, and you are being exposed to a second one (you can still be a child, but you have had significant exposure to a first language). SLA can be characterized by



**interlanguage  
grammar**

intermediate  
grammar that is  
influenced by both a  
person's native and  
second languages

what is called **interlanguage grammar**, the grammar that is influenced by both the first language (L1) and the second language (L2) and has features of each (for more discussion see White 2003).

L1 → interlanguage grammar → L2

The fact that you can tell what someone's first language is even though they are speaking a second one illustrates the influence of L1. The speaker *transfers* the phonology of the first language to the second one. So someone whose native language is Hindi will sound different speaking English as a second language than someone whose first language is Croatian. Interlanguage grammar is also influenced by L2; a speaker whose L1 is French may place adjectives after the noun in English, consistent with French placement. So they may say *coat long*, rather than *long coat*. Speakers of Japanese learning English often do not use determiners and articles such as *the* and *a*, producing such utterances as *dog barked* or *I like car*. This is because in Japanese the information expressed by these English words is indicated in other ways than by separate words preceding nouns.

Much more is involved; as you'll see throughout this book, knowing a language involves far more than knowing a list of grammatical rules. And just as in the case of first language acquisition, we can learn much about second language acquisition from studying the “mistakes” second language learners make, as well as the ones they don't make even though we might expect them to.

**RPE 2.4**

## Social Aspects of Second Language Acquisition

The social aspect of learning a second language is crucial. Adults learning a second language bring to this task a much different set of tools (and inhibitions!) than those that children bring to the acquisition of their L1—and to the acquisition of L2 as well, for that matter. Adults are more conscious of cultural codes and rules, which can both help and hinder the language learning process.

Second language acquirers may also have been exposed to *metalinguage*, a way of talking about language that we often learn in school. So they may have some understanding of grammatical terms and concepts, which will affect acquisition of a second language.

Another important factor is motivation; we acquire our first language without conscious motivation, but we often learn a second language for a specific reason: a job, interest in a culture, cultural integration, and so on (Selinker 1972). (Interestingly, studies have shown that success in SLA requires motivation, but it doesn't matter much what *kind* of motivation.) In other words, how you feel about the SLA process plays a crucial role in your success at the task. How self-conscious you are, how much you do or do not identify with the cultural community that speaks the language you are attempting to acquire—such factors contribute to second language acquisition. There is a



lot of anecdotal evidence that children can acquire second languages more easily than adults. Think about families from non-English-speaking countries who immigrate to North America; the children often quickly become fluent in the language and then serve as translators for their parents, whose second language acquisition typically lags behind that of their children.

## Second Language Acquisition and Universal Grammar

One very interesting question that arises when we consider the differences (and similarities) between acquiring L1 and acquiring L2 is the role of Universal Grammar. We've seen that there is evidence that we rely on UG to acquire our first language as children. We've also seen that there may be a critical period for language acquisition, after which our window of opportunity for gaining native proficiency in a second language may narrow. Does this mean that we have less access to UG after that window closes? Is this what makes acquiring a second language as an adult more difficult than doing so as a child? There are many such questions, and the answers we ultimately find to them will contribute to our understanding of the complex human capacity for language and how we learn it and teach it.

RPE 2.5

## Two Native Languages: Bilingualism

**bilingualism (bilingual language acquisition)** native ability to express oneself in two languages acquired simultaneously, usually at a very young age

Second language acquisition is different from **bilingualism** or **bilingual language acquisition**. Bilingual acquisition is the *simultaneous* (or nearly so) acquisition of more than one first language. Even though more than half of the world's population is bilingual, there are many misconceptions about what it means to be a native speaker of more than one language. One reason for this is that bilingualism itself is difficult to define: proficiency in the languages spoken can depend on, for example, opportunities for use, cultural attitudes toward bilingualism in school, the developmental stage of each language, and so on. As a result of the complexity of even defining what it means to be bilingual, many myths surround this linguistic phenomenon. Often, these misconceptions are linked with social attitudes about the bilingual speakers themselves and with ideas about cultural identity, attitudes about immigration and immigrant populations, and so on. (See Adger et al. 2002; MacGregor-Mendoza 2005.)

hwaet!

Bilinguals have higher IQs, by about ten points, than monolinguals!

## Misperceptions about Bilingualism

One common myth about bilingualism is that bilingual speakers can't keep the two languages they speak straight. Perhaps (monolingual) people think this because they simply can't imagine knowing two languages, and they assume that doing so would inevitably cause confusion. But in fact, studies have shown that bilingual children possess a number of cognitive

advantages over monolingual children. Bilinguals have a wider range of linguistic tools at their disposal and learn how to use them earlier than their monolingual peers. They often have superior communicative sensitivity and acquire other cognitive skills earlier and faster than monolinguals.

Negative perceptions about bilingualism can have detrimental effects. A child who is not allowed to speak his or her heritage language at school (or at home, in an effort to increase the child's success in school) can lose self-esteem and may come to think of the language of his or her parents and family as bad or stupid. A child who loses his or her heritage language also loses the means of communication with his or her parents and family.

Another myth is that switching between two languages, a process called **codeswitching**, means that the speaker doesn't know either language very well. But being able to codeswitch requires a great deal of grammatical and conversational expertise, and in two languages! Speakers codeswitch for a variety of reasons. A Spanish–English bilingual, for example, may use an English word or phrase because it has meanings a Spanish word doesn't, or he or she may switch from Spanish to English (or vice versa) because of the social context. For example, codeswitching may depend on who is being spoken to, what is being talked about, and when the conversation is taking place.

Codeswitching involves two or more distinct languages and is therefore distinct from *borrowing*, where a speaker uses a word from another language (that he or she may not even speak). An English speaker who says, “He has great *joie de vivre*” is borrowing a French phrase meaning ‘enjoyment of life’ but is not codeswitching.

Codeswitching can happen at the word level or can involve longer phrases of several words and even sentences. Here are some examples of speakers' codeswitching with Spanish and English. (Spanish words are italicized.)

*Entonces*, I will say *¿dónde está el diccionario?*

Then I will say, where is the dictionary?

*Es muy* beneficial.

It is very beneficial.

*Yo empecé después del* kindergarten.

I started after kindergarten.

*Porque en español* they play so many soap operas, *es ridículo*.

Because in Spanish they play so many soap operas, it's ridiculous.

### codeswitching

switching between two languages during one conversation

### RPE 2.6

## Our Capacity to Create Language

**creole** native language with full grammatical complexity that develops (over time) from a pidgin

The spontaneous creation of new languages—called *language genesis*—is another piece of evidence for our innate linguistic ability.

The popular notion of **creole** varies greatly. Most North Americans likely think of the people, culture, and language of Louisiana. Within Louisiana, *creole* is used to describe people of African, Haitian, French,

**pidgin** a simplified, nonnative “contact” language that develops to enable speakers of distinct languages to communicate

Spanish, and Native American heritage or a mixture thereof and belonging to a cultural group known as the Creoles in southern Louisiana. For linguists, however, *creole* refers to a kind of language genesis, or language birth. Creoles typically evolve from **pidgin** languages, or *contact* languages.

## Pidgins and Creoles

Pidgins and creoles are intimately connected. When speakers of different languages come into contact and need to communicate, a (usually) temporary, rudimentary form of language develops. The speakers maintain their native language(s) but use the pidgin language to communicate between the two (or more) groups. Pidgins generally have the following characteristics:

- Have no native speakers
- Are the result of contact between two or more languages
- Have a grammar of their own, but it is a simple grammatical system
- Have a small vocabulary (words are borrowed from the contributing languages)
- Are not mutually intelligible with the contributing languages

The development of a pidgin usually requires a situation that involves at least three languages, one of which is dominant. If only two languages are involved, there is likely to be a direct struggle for dominance. A direct struggle for dominance did take place between English and French after the Norman Conquest of England in 1066—a struggle won, in that case, by the socially inferior language (English) only after two or more centuries of coexistence (we talk more about this situation in Chapter 11). More typical is a situation in which the language of the people in power becomes the dominant language, as happened after English speakers came to the New World and the many Native American languages in North America became minority languages.

The dominant language usually contributes most of the vocabulary of the pidgin; this language is called the *superstrate* language. The other languages that contribute to the pidgin are called the *substrate* languages.

A creole language is the result of contact involving two or more languages, as with a pidgin, but it develops into a more fully formed, complete language and has native speakers. Creoles often result when the children of speakers of pidgins develop them into complete languages with larger vocabularies and more complex grammatical systems.

Tok Pisin (whose name comes from the English words *talk pidgin*) is a language of Papua New Guinea that began as a pidgin and developed into

a creole, with influences from English, German, Portuguese, and various Austronesian languages. Here are some sentences in Tok Pisin:

### Tok Pisin

Ken i *bin* wok asde.  
 Ken *bai* i wok tumora.  
 Ken i wok *i stap* nau.  
 Ken i wok *pinis*.  
 Ken i *save* wok long Sarere.  
 Ken i *ken* wok.  
 Ken *inap* wok.

### English

Ken worked yesterday.  
 Ken will work tomorrow.  
 Ken is working now.  
 Ken is finished working.  
 Ken works on Saturday.  
 Ken can work (he is allowed to).  
 Ken can work (he has the ability).

## hwæt!

Papua New Guinea, where Tok Pisin is spoken, is about the size of California, but it has some 800 languages, many of them completely unrelated to one another.

Though we can see—and especially hear, when these words are read aloud—the similarities in vocabulary to English, the words have very different functions in Tok Pisin. *Bin*, borrowed from English *been*, is a past tense marker; *bai*, from English *by*, indicates futurity; and so on. Because much of the vocabulary of pidgins and creoles is borrowed from one of the contributing languages, it can sound like a ‘bad’ version of that language. However, when a pidgin develops into a creole, it becomes a unique language with distinct phonology,

morphology, syntax, and semantics. Linguist Derek Bickerton, who has studied pidgins and creoles since the 1960s, shows that there are similarities among new languages—creoles—that do not even share contributing substrate or superstrate languages. (See Bickerton 1984 for more discussion.)

Table 2.3 shows some comparisons of creole languages. Two of them, Hawaiian Creole and Sranan (spoken in Suriname), are so-called English based creoles; that is, English is the superstrate language, from which the creoles take much of their vocabulary. The other, Haitian Creole, is French based; French is the superstrate language, contributing much of the vocabulary.

This table demonstrates some of the similarities of these three creole languages. You don’t need to worry about what *anterior*, *irreal*, and *nonpunctual* mean here; rather, notice the fact that these grammatical markers all occur and that they all occur in the same order in these three new, diverse languages. The anterior marker precedes the irreal marker, which precedes the nonpunctual marker. This same order occurs in other creoles around the world as well. Bickerton argues that similarities such as these among unrelated creole languages cannot be explained by contact with other languages; rather, he believes they provide strong evidence for the innate human capacity to create language. We return to a discussion of creoles in Chapter 14.



Table 2.3 Comparison of Creoles

	Hawaiian Creole	Haitian Creole	Sranan
he walked (base form)	he walk	li maché	a waka
he had walked (anterior)	he bin walk	li té maché	a ben waka
irreal (he will/would walk)	he go walk	l'av(a) maché	a sa waka
nonpunctual (he is/was walking)	he stay walk	l'ap maché	a e waka
anterior + irreal (he would have walked)	he bin go walk	li t'av(a) maché	a ben sa waka
anterior + nonpunctual (he was/had been walking)	he bin stay walk	li t'ap maché	a ben e waka
irreal + nonpunctual (he will/would be walking)	he go stay walk	l'av ap maché	a sa e waka
anterior + irreal + nonpunctual (he would have been walking)	he bin go stay walk	li t'av ap maché	a ben sa e waka

From Bickerton, D. 1985. Creole languages. *Language: Introductory readings*, 4th edn., ed. by V. Clark, P. Escholz & A. Rosa, 134–151. New York: St. Martin's.

## Nicaraguan Sign Language

A striking example of creolization is Nicaraguan Sign Language (*Idioma de Señas de Nicaragua*, or *ISN*). ISN differs from other creoles in having emerged essentially out of nothing rather than out of contact among existing languages. The discovery of this new language has been a boon not only for its signers but for linguists as well, as it provides a wonderful example of humans' ability to create language.

The short story of Nicaraguan Sign Language is as follows. Deaf people who had had no exposure to a language, by virtue of not having heard the spoken language around them and not having been exposed to a sign language, were brought together in the 1980s in a school for the deaf in Nicaragua. They quickly developed a pidgin sign language based on no input except a few individual *home signs*. (Linguists define *home signs* as a gestural communication system, though not a fully developed grammatical system. It is fairly common for some deaf children—those who have hearing parents and no access to a sign language community—to develop home signs.) In this case, the pidgin sign language emerged from human contact but not from *language* contact.

Most of the students in the school were teenagers, and although they were eventually able to communicate quite well, the “language” they developed had a great deal of grammatical variability and variation across signers, and it lacked grammatical complexity. However, the younger

LINGUISTICS  
IN THE NEWS

## A Gene for Language?

During the 1990s, it came to the attention of the scientific community that over three generations about half the members of a particular family, called the KE family, have suffered from a unique language disorder. Members with the disorder have largely unintelligible speech together with other cognitive and physical problems, including problems controlling the face and mouth. Scientists have uncovered what appears to be the source of this disorder, a mutation in a gene called FOXP2. Prior to the discovery of FOXP2, there had been no evidence of a molecular source for speech and language disorders, and the discovery sparked a media frenzy over a “language gene.” For example, *Wired*, an online magazine, announced “First Language Gene Found,” and *National Geographic* magazine proclaimed “Scientists Identify a

Language Gene.” Although the mutation in FOXP2 does seem responsible for the deficits in language suffered by the KE family, to call it a language gene is an oversimplification. More interesting, perhaps, is that a version of FOXP2 is also found in apes and that the human version of the gene seems to have appeared around the time associated with the development of language in humans, some 50,000 years ago. It has recently come to light that not only do humans and apes have a version of FOXP2, but so do mice and mushrooms!

*For more information*

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disorder. *Nature Genetics* 18. 168–170.

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Pinker, S. 2001. Talk of genetics and vice versa. *Nature* 413. 465–466.

Trivedi, B. 2001. Scientists identify a language gene. *National Geographic Today*. [http://news.nationalgeographic.com/news/2001/10/1004\\_TVlanguagegene.html](http://news.nationalgeographic.com/news/2001/10/1004_TVlanguagegene.html). (4 October, 2008.)

Vargha-Khadem, F., et al. 1995. Praxic and nonverbal cognitive deficits in a large family with a genetically transmitted speech and language disorder. *Proceedings of the National Academy of Sciences USA* 92. 930–933.

students in the school saw the pidgin being signed and quite quickly began to develop that pidgin into a full-fledged language—a creole. This distinction between older and younger signers seems to be evidence for a critical period, as well as for another important aspect of language: It does not develop on its own in isolation but takes two, a speaker and a hearer, to develop spontaneously. (So, this answers the “desert island question”: Would a human who was never exposed to language, stranded on a desert island alone, develop language? No.)

Linguist Judy Kegl was the first to observe the signing by these students, and she and other researchers have gone back to Nicaragua numerous times over the last two decades. It should be noted that because the data on many early creoles are rather incomplete, many facts about creoles remain a mystery. However, the data and resulting research on ISN are nearly uncontroversially an example of the human capacity for the creation of language out of essentially nothing.

## Language and the Brain

So far, we've seen that there is ample evidence that humans have a unique cognitive ability to acquire language. A logical question to ask next is, What does this mean about our brains? Is language *located* somewhere in the brain, or is it simply part of our general intelligence, our all-purpose learning strategies? This question raises a range of others: If someone's language is impaired, are his or her other faculties also necessarily impaired? Can language alone be affected? Can someone's language be unaffected by a brain disorder, trauma, or impairment while his or her other cognitive abilities seem disrupted? And what does all this mean about the anatomy of the brain?

### Language Intelligence?

In this section, we will take a look at three cases, each of which provides evidence that our capacity for language is in some ways separate from our other cognitive abilities. We'll look at specific language impairment; the case of Christopher, the linguistic savant; and Williams syndrome.

#### Specific Language Impairment

Do all children acquire language if they are exposed to it? With only a few exceptions, children are extremely competent language learners. People with impaired cognitive abilities (from various kinds of mental retardation, for example) generally develop language exceptionally well, which suggests that linguistic ability may be separate from other parts of cognition. One exception to natural language ability occurs in children who have **specific language impairment (SLI)**, a disorder in which children do not acquire language in the normal way and who continue to have low language performance as adults. For those with the disorder, language is disrupted while other cognitive abilities are not affected at all.

**specific language impairment (SLI)** disorder in which children do not acquire language in the normal way but are otherwise not generally cognitively impaired

#### Linguistic Savants

Does anyone have “extra” linguistic ability? Yes, a few do. A man named Christopher, though extremely challenged in other ways (for example, he needs help dressing himself, finding his way, and tying his shoes) has a nonverbal IQ of about 40 (depending on how IQ is measured, the average is about 100, and low is 55) but is quite gifted linguistically. Christopher is known as a **linguistic savant**. He can read, write, and communicate in a number of languages and has knowledge of many more, though he may not speak them fluently. Some of the languages Christopher is familiar with are French, German, Spanish, Italian, Modern Greek, Dutch, Hindi, Berber, Turkish, Finnish, and Welsh.

**linguistic savant** person who is linguistically gifted but whose other cognitive abilities are below average

Neil Smith (1995), a linguist who has worked with Christopher for years, says that what is striking about Christopher is his ability to master languages



## hwaet!

When Christopher was given a postcard with *thank you* written in 100 languages, he was able to immediately identify twenty-nine of them.

RPE 2.8

**Williams syndrome** rare genetic disorder that involves severe retardation, distinct physical characteristics, and uniquely expressive language ability

and his inability to solve ordinary problems. Smith invented a language that violated rules of Universal Grammar, making it an “impossible” human language, although it was still quite logical. The invented language started off following rules of Universal Grammar, but then after several months, Smith introduced ways of marking past tense and negation that are unlike the ways that any languages in the world mark these, though the rules were logical and simple. The people of average or higher verbal IQs whom Smith tested did perfectly on this task, using their logical reasoning to figure out the how to form past-tense verbs and negative sentences in Smith’s made-up language. Christopher couldn’t do it. Smith argues that this is because Christopher doesn’t have a logical, rational power that enables him to work out things that fall outside his innate language capacity. Because of his innate (and in his case, exceptional) linguistic ability, acquiring languages is no problem for him. Smith claims that Christopher is a very good example of a person learning a language in exactly the way that Chomsky says we do, equipped with UG.

## Williams Syndrome

**Williams syndrome** is a very rare genetic disorder that typically results in severe retardation; people with the disorder have an IQ of about 50. Though they cannot tie their shoes or tell left from right, people with Williams syndrome are unusually socially expressive and linguistically adept. Here is an excerpt from the conversation of Crystal, an 18-year-old woman with Williams syndrome (reported in Pinker 1994: 52).

And what an elephant is, it is one of the animals. And what the elephant does, it lives in the jungle. It can also live in the zoo. And what it has, it has long, gray ears, fan ears, ears that can blow in the wind. It has a long trunk that can pick up grass or pick up hay. . . .

Crystal, like others with Williams syndrome, has what appears to be the linguistic competence of a normal person, a fact that can only be explained if we assume that language ability is, at least in some aspects, separate from other cognitive abilities.

So it appears that intelligence alone is not what leads to language acquisition. The ability to acquire language appears, instead, to be a biologically endowed human behavior, a behavior that can be disrupted, and also one that, in very rare cases, can be exceptional in some people. Such evidence suggests that whatever cognitive ability we use to acquire language is in some way separate from other cognitive abilities.

## A Language Center in the Brain?

In this section of the chapter, we turn to how the brain is structured for language, the topic of study called *neurolinguistics*, to further investigate



**localization** theory that different parts of the brain are associated with or control particular behaviors and functions

**aphasia** language disorder resulting from trauma to the brain

**Broca's aphasia** form of aphasia characterized by labored speech and general agrammatism

the innate human capacity for language. People have been interested in how the brain works for centuries, and the study of language provides a unique opportunity to deepen our understanding of this complex organ. We've come a long way since the practices of the early Egyptians, who considered the heart, not the brain, the center of intelligence (and even removed the “waste product” brain during the embalming process before mummification). We've also moved forward since the early nineteenth century, when Franz Joseph Gall proposed that certain areas of the brain control certain behaviors. Though this idea of **localization** is still of use today, Gall's work led to the (quite unscientific) theory of *phrenology*, the study of the connections between personality traits and the bumps on the skull. Now, with electroencephalography (EEG), positron emission tomography (PET) scans, and functional magnetic resonance imaging (fMRI), we've come a long way! (See Figure 2.1.) As we'll see in this section, language disorders that result from trauma to the brain provide a rich resource for information leading to our understanding of the brain and at the same time expand our knowledge of the innateness of human language.

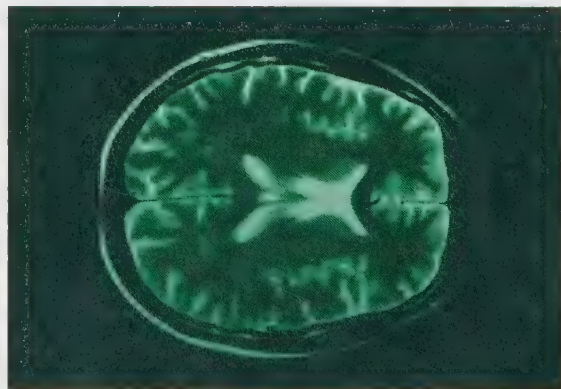
People who experience damage to the brain, particularly to the frontal lobe of the left hemisphere, typically experience certain kinds of language disorders and deficits. Such language-related disorders and deficits, called **aphasia**, provide us with insights into the areas of the brain that seem to be primarily responsible for language. The two major types of disorder are **Broca's aphasia**, named after Paul Broca, a French physician, who first

**Figure 2.1** A. Cover of the *American Phrenology Journal* of 1848. B. Science has come a long way in determining how the brain controls human behaviors!

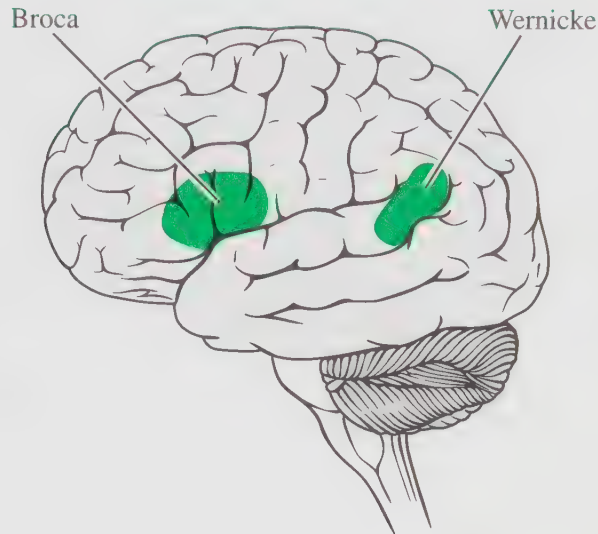
A.



B.



**Figure 2.2** Lateral view of the left hemisphere of the human brain, showing the positions of Broca's and Wernicke's areas.



**Wernicke's aphasia** form of aphasia characterized by fluent speech that makes little sense

*hwæt!*

You can find Phineas Gage's brain and the tamping iron that went into it on display at Harvard Medical School.

**lateralization** idea that cognitive functions reside in or are controlled by either the left or the right side of the brain

described it in the 1860s; and **Wernicke's aphasia**, named after German physician Karl Wernicke, who first described this type of language deficit in the 1870s. (See Figure 2.2.) Their research led to a new field of neuroscience. There are many different aphasias, including *agraphia* (the inability to write), *alexia* (the inability to read), and *anomia* (the inability to name things in a particular category or categories).

Both Broca's and Wernicke's aphasias provide evidence for the separation of language from other cognitive abilities, for patients with these language disorders can be in command of other faculties that aren't closely tied to language. They test well on nonverbal IQ tests, and they can set clocks, read maps, make things, and carry out commands, suggesting that at least in some ways, language abilities are separate from other cognitive abilities. Aphasia results from damage to the frontal lobe of the left hemisphere, suggesting that language is **lateralized** on the left side of the brain. In addition, people with Broca's aphasia experience language deficits that are different from those suffered by people with Wernicke's aphasia, which suggests that not only is the brain lateralized for language but that particular regions are associated with specific linguistic behaviors. (Seventy percent of people with damage to the left hemisphere experience aphasia, but only 1 percent of those with damage to the right hemisphere do.)

## Did You Know...?



## Poor Phineas Gage

Phineas Gage was the foreman of a construction gang preparing the way for the railroad in Vermont. In 1848, an accident occurred in which a tamping iron (more than 3 feet long, weighing 13½ pounds) passed through Gage's skull. The tamping iron went in point first under his left cheekbone and came out through the top of his head, landing 25 to 30 yards behind him. The front left part of his brain was destroyed, but Phineas recovered. It is remarkable that he not only survived but was able to continue to work (although not at his previous job) and lead a relatively normal life. Unfortunately, his personality was dramatically altered, to a point where people said that he was "no longer Gage." This was striking evidence of how brain injury and trauma can affect some behaviors but not others, and for the possible localization of the brain: that the brain is divided into areas that have certain functions.

**agrammatism**  
disorder caused  
by trauma to  
Broca's area so that  
word order does  
not conform to  
grammatical rules of  
the language

## Broca's Aphasia

Broca's aphasics tend to have labored speech and general **agrammatism**; they have trouble with word order and difficulties with function words (prepositions, articles, auxiliary verbs) and inflectional affixes (-ed, -s). (Remember that children in the early stages of language acquisition also produce such "telegraphic" speech, and Genie's speech is often described as agrammatic.) They have frequent word-finding pauses, and though they appear to understand language quite well, they have great difficulty producing grammatical utterances. Broca's aphasia is often called *nonfluent aphasia*; speakers have difficulty producing language but not necessarily comprehending it.

Here is a patient with Broca's aphasia trying to explain how he came to the hospital for dental surgery:

Yes . . . ah . . . Monday . . . er . . . Dad and Peter H . . . (his own name), and Dad . . . er . . . hospital . . . and ah . . . Wednesday . . . Wednesday, nine o'clock . . . and oh . . . Thursday . . . ten o'clock, ah doctors . . . two . . . an' doctors . . . and er . . . teeth . . . yah

RPE 2.9

## Wernicke's Aphasia

Wernicke's aphasia is called *fluent aphasia*. People with Wernicke's aphasia produce fluent speech, but it makes little sense. They speak with good intonation and also pronounce and order words accurately, but they often use nonsense words and make other lexical errors. Their speech can also seem fragmented: one utterance seems unrelated to another. They also have difficulty comprehending speech. More extreme cases of Wernicke's aphasia are called *jargon aphasia*, in which a speaker uses correct intonation but few real words.



Here is an example from a patient with Wernicke's aphasia:

Well this is. . . mother is away here working her work out o'here to get her better, but when she's looking, the two boys looking in other part. One their small tile into her time here. She's working another time because she's getting, too.

Evidence from aphasia suggests that the brain is lateralized for language on the left hemisphere, and also that certain areas of the brain are localized specifically for language. Aphasia also tells us much about how our grammatical knowledge is organized. Broca's aphasics have trouble with word order (syntax) but not meaning (semantics), and Wernicke's aphasics exhibit almost the opposite behavior, speaking fluently with appropriate word order but in sentences that make little sense. Such evidence suggests that certain linguistic abilities or functions may be located in different areas of the brain.

Evidence from aphasia also tells us something about how our mental dictionary, or lexicon, is organized. People with Broca's aphasia often omit function words such as articles, pronouns, and auxiliary verbs, and they also often omit inflectional endings on words such as plural *-s*, progressive *-ing*, and past tense *-ed*, while people with Wernicke's aphasia have no trouble with these function words and affixes, and their sentences exhibit close to normal word order. This evidence suggests that function words are stored separately from content words in our mental lexicon and that brain trauma can affect the loss of one class of words but not the other. *Anomia* is a type of aphasia that affects semantic classes of words. People with anomia are unable to find words, which leads to substitutions—such as *wing* for *bird*—or circumlocutions, such as describing something but not being able to name it. They also may not be able to name objects in the same semantic category, such as fruits or different pieces of photography equipment. That aphasia can affect different semantic classes of words tells us that these classes form a component of our grammar.

RPE 2.10

RPE 2.11

## More Evidence for Lateralization

We can gather further evidence for the organization of language in the brain from dichotic listening and brain imaging. But first, we need a bit more information on the structure of the brain.

The two central hemispheres of the brain are connected by a bundle of fibers known as the *corpus callosum*, which transmits information between the two hemispheres. The brain is controlled contralaterally, meaning that sensory information is received in the contralateral (opposite) side of the brain from the side of the body from which it is sent—the left side of the body is controlled by the right hemisphere, and vice versa. So if you scratch your ear with your right hand, the



left side of your brain has sent the signal to do so. We have seen that the left hemisphere is the dominant side for language, and in what follows we'll discuss two types of evidence for this lateralization.

### Dichotic Listening

**dichotic listening** method of testing processing of linguistic stimuli wherein people hear different sounds in two ears simultaneously

**Dichotic listening** demonstrates how the left hemisphere is dominant for language. For this task, two different sounds (or words) are played simultaneously, one into each ear, through earphones. For example, the word *cat* may be played into the right ear and *cup* into the left. The listener then tells the examiner what he or she hears first (and best); this is typically the word played in the right ear, for that sound travels directly to the left hemisphere, where it is processed, whereas the word played in the left ear travels to the right hemisphere, then back over to the left hemisphere for processing, resulting in a slight delay.

The right ear even seems to have an advantage for decoding linguistic stimuli, regardless of whether those stimuli are in the form of words in the listener's language; nonsense words, single syllables, and even words played backwards seem to be processed more quickly through the right ear and hence through the left side of the brain. (This behavior is referred to as right ear advantage, or REA.)

This right ear advantage may be because of something larger than language; research has shown that the left hemisphere may be better at tasks involving temporal order, and language is simply one such task. Morse code, which requires temporal processing but is a nonlinguistic stimulus, is also processed more accurately through the right ear.

### Split-Brain Patients

**split brain** severed corpus callosum, usually to relieve epileptic seizures

Other interesting evidence for the lateralization of the brain for language (and contralateralization of the brain in general) comes from **split-brain** patients. Such patients have their corpus callosum severed in order to control seizures, usually from epilepsy. Though such an operation is a drastic measure, results are overall very positive. In the 1960s and 1970s, Michael Gazzaniga (1970) studied the language behavior of split-brain patients. They could talk normally (and he could cue patients verbally because they could hear his cues through both ears). But as soon as he devised experiments that required each side of the brain to communicate with the other, he got some surprising results. He found that a split-brain patient who held something in his left hand couldn't name that object. Gazzaniga knew already that each eye and hand sends its signal to the opposite side of the brain, so something held in the left hand sent a signal to the right side of the brain. When the patient put the object in his right hand, sending the signal to his left brain, he could name the object without a problem. When Gazzaniga showed the patient a printed word through

the patient's left visual field, the patient couldn't read it. Shown the word through the right visual field, the patient read the word without a problem. Gazzaniga's work supports the hypothesis that the left brain is lateralized for language and that the corpus callosum transmits the signals between the two hemispheres.

### Brain Imaging

Research on language and the brain also involves PET scans, MRIs, and EEGs, all of which are used for (among other things) studying brain activity while the person being tested performs specific tasks. Ongoing research involves studying how we process words we read and hear, how we learn words and

## Accent on Clinical Linguistics



Linguist David Crystal defines *clinical linguistics* as "the application of linguistic sciences to the study of language disability in all its forms" (2003: 673). "Disability" here refers to anything that would fall under the description of abnormal language use and thus includes a wide range of phenomena. The range of professionals involved in this field is also very broad and includes speech and language pathologists, teachers, social workers, psychologists (including educational and clinical psychologists), and neurologists.

The goal of clinical linguistics is to accurately describe, diagnose, assess, and treat language deficits and communicative disorders, using the tools of linguistic science. Research and practice

in clinical linguistics therefore not only tell us more about language disabilities and how to treat them but also shed light on the nature of language itself. Clinical linguistics therefore contributes much to our understanding of how language is processed, perceived, and produced and has much to tell us about our grammatical system.

Clinical linguistics is a relatively young but growing field with a major professional journal, *Clinical Linguistics and Phonetics* (published by Informa Healthcare), books specifically devoted to the subject, and departments and programs across the United States and Europe dedicated to its study. Some of the areas of study that fall under clinical linguistics include phonetic disorders in speech perception and production; communication disorders in multilingual populations; pragmatic aspects of speech and language disorders; disorders related to hearing impairment; sign language and lip-reading; and the study of language production, perception, and use by children and adults with autism, Williams syndrome, traumatic brain injury, and cleft palates.

The need for clinical linguistics is clear: not only to provide effective therapies for those

diagnosed with language disorders and deficits but also to guard against misdiagnosis. To take an individual example, Crystal reports that a child who fails to respond to questions may be considered rude and uncooperative. However, such behavior may have its source in the child's inability to understand and process rules that govern conversation. Fillmore and Snow (2002) point out that in school, teacher evaluations of students' ability are largely based on language. Nonnative English speakers or speakers of stigmatized varieties of English can be declared to be slow learners. Once sorted this way, children receive substantially different instruction, reinforcing any initial differences among them in speed of learning and eagerness to learn. They also note the overrepresentation of African American, Native American, and Latino children in special education placements, which suggests that normal language features associated with a vernacular variety of English or with learning English as a second language are often misinterpreted as an indication of

developmental delay. So, the broad field of clinical linguistics provides a wealth of very practical applications for linguistic knowledge.

*For more information*

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Fillmore, L. & C. Snow. 2002. What teachers need to know about language. *What teachers need to know about language*, ed. by C. Adger, C. Snow & D. Christian, 7–53. McHenry, IL: Delta Systems.

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associate them in categories, and how we parse sentences, among many other fascinating topics. Research on sign language and the brain also promises to tell us things about language beyond what is revealed by studying oral language alone. Are the same areas of the brain activated by (visual) signs as by (auditory) speech? What can we learn about lateralization from sign language aphasia?

## Summary

In this chapter, we've explored a variety of different evidence for the human capacity for language. We've seen that as children, we seem to tease out complex rules of grammar from the (rather chaotic linguistic) stimuli we're exposed to, whether the stimuli are oral or gestural. That language acquisition proceeds at basically the same rate and through the same stages with both hearing and deaf children supports the idea that we are hardwired for language in some way, which allows us to accomplish this complex task at an early age. We have



taken a look at some of the differences between first language acquisition and the acquisition of a second language, exploring evidence for a critical period of language acquisition and for Universal Grammar. We have also considered what it means to be bilingual—to have two native languages—and what we can learn about the human capacity for language from the study of creolization—the creation of language from a contact language, or pidgin. We’ve introduced the extraordinary story of Nicaraguan Sign Language, a language that emerged essentially out of nothing except the drive to communicate. We have then turned to what all of this means about our brains. We have looked at a variety of evidence that our capacity for language may be in some ways separate from other cognitive abilities and that in linguistic savants such as Christopher this capacity may be more highly developed than in those of us with normal intelligence. The study of aphasia tells us even more about the anatomy of the brain, how language may be lateralized on the left side of the brain, and how specific areas may be responsible for specific linguistic tasks. Evidence from dichotic listening also suggests that the left brain is lateralized for language, and the technology of brain imaging continues to deepen our understanding of this uniquely human capacity.

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## Review, Practice, and Explore

### RPE 2.1 Children's Rules

Children often produce forms that they don't hear in adult speech—forms that nevertheless follow a systematic rule. In the following examples of children's language, what systematic rule is evident here? How do these data support the human capacity for language? Do children learn by imitation?

- I buyed a fire dog for a grillion dollars.
- Hey, Horton heared a Who.
- My teacher holded the baby rabbits and we patted them.
- Daddy, I stealed some of the people out of the boat.
- Once upon a time, a alligator was eating a dinosaur and the dinosaur was eating the alligator and the dinosaur was eaten by the alligator and the alligator goed kerplunk.

What do the following examples of conversations with children tell us about how children acquire language, and how do they provide evidence for our linguistic "hardwiring"?

Child: I taked a cookie.

Adult: Oh, you mean you took a cookie.

Child: Yes, that's right, I taked it.

Adult: Adam, say what I say: Where can I put them?

Child: Where I can put them?

### RPE 2.2 Two-Year-Olds Have No Words

Even though children seem limited in the number of words they can string together in the early stages of acquisition, their utterances can express a range of complex meanings. For example, negative utterances at this stage can express denial, rejection, or nonexistence. Study the following sets of negative utterances of children in the early multiword stage. What kind of negation is being expressed in each set? (Adapted from Foss & Hakes 1978.)

- Allgone juice, no hot, no more light anymore play
- No dirty soap, no meat, no go outside
- No morning (it was afternoon), no daddy hungry, no truck

**RPE 2.3** Adult Speech to Children

Here are some examples of interactions between adults and children. What kinds of correction or reinforcement does the adult offer the child? What does the adult *not* correct? Do you think these interactions might help or hinder language acquisition? Why?

Child: [picking up toys].

Adult: Thanks for picking up your toys!

Child: Sally goed to the store.

Adult: No, Sally went to *work*.

Child: Doggy gone.

Adult: Yes, Rover went for a walk with your sister.

Child: I want a cookie.

Adult: You want a cookie? Well, here you go!

Child: Him ride bike.

Adult: Yes, he's riding a bike.

**RPE 2.4** How Would They Say It?

Here are some examples of issues that arise for speakers learning English as a second language. Based on the information given about each language, try to come up with what the learner might say. (Adapted from Haussamen 2003.)

- In Vietnamese, there is no article before the word for a profession (*student, teacher, doctor*, etc.). What is a sentence a Vietnamese speaker learning English might say?
- In Korean, pronouns aren't marked for gender, so you might hear a Korean speaker learning English use *it* in places where native English speakers might not. What is a possible sentence the Korean speaker might utter?
- In Japanese, pronouns don't have to match the noun they refer to, so a singular pronoun can refer to a plural noun and vice versa. What kind of sentence might a Japanese speaker learning English utter?
- In Cantonese, Japanese, and Korean, there are no plural forms of nouns (plurality is marked in other ways). What sentence might a speaker of one of these languages who is learning English produce?

**RPE 2.5** Acquiring or Teaching a Second Language

Explore one of the following questions about second language acquisition in more detail in a short research paper.

- What are some of the leading theories about how we acquire a second language, and how do these theories differ from one another?
- What are some of the theories about how to teach a second “foreign” language (now more frequently called *world language*) in school?
- Investigate English as a Second Language (ESL), Teaching English as a Second Language (TESL), and Teaching English to Speakers of Other Languages (TESOL). What are some of the theories about how to teach English language in a multilingual classroom?

- How does the U.S. system differ from the Canadian or British systems? How are heritage languages (the speakers' first language, or L1) treated in such systems?

## RPE 2.6 Bilingual Education

Bilingualism is a fascinating linguistic phenomenon of interest not only to linguists but also to educators. Bilingual education is both much studied and controversial. Many states and organizations want to limit bilingual education, and other organizations and states promote it. Do some research on the pros and cons of bilingual education. What are the arguments in favor of it, and what methods and approaches seem to be most effective? Where has bilingual education been argued to be ineffective, and why?

## RPE 2.7 Creole Grammar

Some tourist guidebooks describe pidgins and creoles as *baby talk*, *broken English*, *improper*, or *grammarless*. But as we've seen, creole languages have systematic rules and are fully developed linguistic systems. Below is a set of data that illustrate the rule of plural formation in Nicaraguan Creole English (from Honda and O'Neil 2008).

### Nicaraguan Creole English

- The boat-dem de in the river.
- Ronald send to me two turtledove.
- Is many dog in Bluefields?
- These dog-dem in the street.
- He want seven case of beer.
- He did see the case of beer-dem.

### Standard English

The boats are in the river.  
 Ronald sent me two turtledoves.  
 Are there many dogs in Bluefield?  
 These dogs are in the street.  
 He wants seven cases of beer.  
 He saw the cases of beer.

The word *dem* is borrowed from the English word *them*; however, it has a different meaning and use in Nicaraguan Creole English. When do you use *-dem* in Creole?

Is the following sentence grammatical in this language?

- The man-dem a plaant kann.

The men are planting corn.

## RPE 2.8 Linguistic Savants

The Linguistic Society of America maintains an archive of language-related short videos at the University of Georgia. At the website <http://www.uga.edu/lava/Smith/Smith.html> are several clips about Christopher taken from the movie *Het Talenwonder*. Watch the clips and write a one- to two-paragraph response. Consider what Christopher's language ability tells us about the following:

- the human capacity for language
- our language "intelligence" and its relation to other cognitive abilities
- Universal Grammar

## RPE 2.9 Genie Says

Here are some examples of the speech of Genie, the child who was not exposed to language until age 13. Her speech has been described as *agrammatic*. What kinds of word order errors does Genie make, and does her speech resemble aphasia in any way? Does it resemble any of the stages of acquisition we've discussed in the chapter? Explain. (Data from Curtiss 1977: 31.)



Adult: Where are the graham crackers?

Genie: I where is graham cracker.

(or)

I where is graham cracker on top shelf.

Genie's way of forming questions:

Where is tomorrow Mrs L?

Where is stop spitting?

Where is may I have ten pennies?

When is stop spitting?

Other examples of Genie's language:

Man motorcycle have.

Genie full stomach.

Genie bad cold live father house.

Want Curtiss play piano.

Open door key.

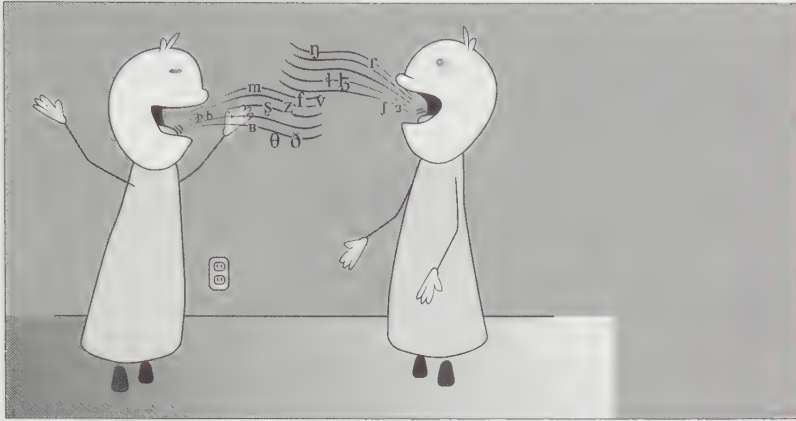
### RPE 2.10 Broca's and Wernicke's Aphasias

Look up some examples of aphasic speech. Find examples of both Broca's aphasia and Wernicke's aphasia and also of one other disorder we have discussed here (agraphia, alexia, anomia).

Explain how each of your examples fits the description of a particular type of aphasia or language disorder.

### RPE 2.11 Sign Language Aphasia

Conduct some research on sign language aphasia. How does it differ from oral language aphasia, and how it is similar? What does sign language aphasia tell us about the brain and how it is lateralized for language?



## Chapter at a Glance

# Phonetics: Describing Sounds

## Key Concepts

- You know a great deal about the complex sounds and the sound system of English; much of this knowledge is not something you usually need to think about, as you produce and manipulate the sounds of your language effortlessly.
- There is not a one-to-one correspondence between sound and spelling, so linguists use a system for describing the sounds of language in which each sound is represented by a single symbol.
- Sounds can be classified into groups based on similarities in the ways they are produced.
- Each language has a distinct set of phonemes, the sounds of a language that result in meaning differences in that language.
- Sounds change and vary over time in patterned ways.

## Did You Know . . . ?

Visible Speech  
Mom Is Bob

## Language Alive! A Disappearing Sound

Why Do We Spell Words with *-ough*?  
Forgotten Clusters  
Do *Dawn* and *Don* Rhyme?  
Double Is Not Long

## Linguistics in the News Peter Ladefoged, Pioneer in Phonetics

## Accent on Product Naming

## Sounds and Symbols

### Phonemes

### Consonants

Voiced and Voiceless Consonants  
Place of Articulation  
Manner of Articulation  
Why All These Distinctions?  
Slips of the Tongue

### Vowels

Diphthongs  
Syllabic Consonants  
Other Vowel Distinctions  
Vowel Shifts

## Phonemes and Allophones

### Summary

### Sources and Resources

### Review, Practice, and Explore

*The pleasure of Shawn's company  
Is what I most enjoy.  
He put a tack on Ms. Yancey's chair  
When she called him a horrible boy.  
At the end of the month he was flinging two kittens  
Across the width of the room.  
I count on his schemes to show me a way now  
Of getting away from my gloom.*

— A POEM CONTAINING ALL THE SOUNDS OF  
ENGLISH, BY NEAL WHITMAN.  
REPRINTED BY PERMISSION.

hwæt!

A version of Neal Whitman's poem appears in the film *Mission: Impossible 3*.

In this chapter, we describe the sounds of language. You will learn the sounds and their descriptions so that we can have a vocabulary to talk not only about the sounds but also about the sound systems of the language. As a literate person, you are used to thinking about the alphabet that we use to write our language as matching up with the sounds we produce. Although it does in some cases, we will talk about some of the many mismatches between sound and spelling, why those exist, and why we're stuck with them.

It will also be quite revealing to discover how much you, as a speaker of a language, know about the complex sounds and the sound system of English; much of this knowledge is not something you usually need to think about, as you produce and manipulate the sounds of your language effortlessly. You ignore nonspeech sounds, eliminate variations in speech sounds that are not relevant, and do a surprising amount of gymnastics with your lips, tongue, and teeth.

**phonetics** study of speech sounds

Thus, we will be studying the sounds of speech, **phonetics**. For the most part, we will be concerned with North American English. We will determine what the sounds are, how they vary, and how to describe them. The applications of phonetic knowledge are important for many other fields. An understanding of phonetics is crucial for teachers of reading and spelling because of the complexity of the English spelling system, a system that is not wholly phonetic. (Not surprisingly, phonetics and phonology instruction is a requirement for teachers in many states.) This understanding is part of the knowledge required for speech pathologists and speech therapists who work with those who have various language delays and disabilities, including loss of speech abilities due to injury or stroke. Phonetics is used by forensic linguists in legal cases for speech identification or to authenticate recordings. And anyone who is a speaker of a language should appreciate the complexity of the phonetic system; you will be surprised by how much you know about manipulating this system to convey meaning.

People have long been concerned with describing the sounds of their languages. Consider the following section of the text called *Marsanes* from *The Nag Hammadi Library*, a group of Gnostic texts likely written around the end of the third century CE.

But know that the oxytones exist among the vowels, and the diphthongs which are next to them. . . . The sounds of the semivowels are superior to the voiceless (consonants). And those that are double are superior to the semivowels, which do not change. But the aspirates are better than the inaspirates (of) the voiceless (consonants). And those that are intermediate will accept their combination in which they are; they are ignorant of the things that are good. They (the vowels) are combined with the intermediates, which are less. Form by form, (they constitute) the nomenclature of the gods and the angels, not because they are mixed with each other according to every form, but only (because) they have a good function. It did not happen that (their) will was revealed. (Robinson 1990)

Many of the terms in the quotation that describe the author's Coptic language are terms we still use to describe English today.

## Sounds and Symbols

Our first step in phonetics will be to learn to use a system of written symbols that linguists have developed for representing the speech sounds of any language. In this system, one sound is represented by one symbol, and each symbol represents only a single sound. Though the English spelling system is somewhat phonetic (that is, the symbols correspond to sounds in a fairly systematic way), it is full of inconsistencies. (We return to a discussion of spelling in Chapter 13, "Representing Language.") Young children learning to read illustrate the distinction between sound and symbol when they misspell words such as *bags* and *pushed* as *bagz* and *pusht*, but once we become literate, we tend to forget about the mismatch between sound and symbol.

Consider the following mismatches between the spelling system and the sound system.

- The same sound can be spelled using quite a variety of letter combinations. Consider the "ee" sound in each of the following and how it is spelled: *plea*, *tee*, *deceive*, *tangy*, *key*, *ski*, *brie*, *people*, and *algae*. And consider the letter <c>, which can represent the initial sound in *candy*, *cent*, *cello*, and *ocean*.
- Several single sounds are spelled using more than one letter: *thin*, *that* (yes, those are two distinct sounds at the beginning of those words), and *chin*, *shin*.
- A single letter can represent more than one sound: *unite*, *untie* and *axe*, *xylophone*.



- Sometimes letters aren't pronounced and so stand for no sound at all (though most of them did at some point in the history of English): *know*, *gnat*, *dumb*, *yolk*, *mouse*, *island*, and *psychology*.
- The same letter combination can result in a range of different sounds. Consider *-ough* in the following: *cough*, *enough*, *bough*, *through*, and *though*.

So the English spelling system is not a good system for representing sound. Instead, we will be learning and using a system to transcribe sounds to symbols that is based on the International Phonetic Alphabet, or IPA, which is used by linguists to transcribe any language.

Most dictionaries include some sort of phonemic transcription as a pronunciation guide, and although most dictionaries use a system of transcription similar to the IPA, they often develop their own system. It would be much easier if they all used the same one! And as you'll see, the IPA is really not very hard to learn.

## Phonemes

**phoneme** unit of sound that makes a difference in the meaning of a word

**Phonemes** are the distinctive sounds in a language. Every spoken language has phonemes, but they differ from language to language. The number of phonemes in any given language can vary slightly depending on the speaker and the dialect; English has about forty distinctive phonemes, which is more than the average number of phonemes across languages, though not extraordinarily so. Almost every language has more consonant sounds than vowel sounds, though to varying degrees. Pirahã, spoken in Brazil, has about ten consonants, and !Xu, spoken in southern Africa, has 141! The most common consonant sounds across languages are /p,t,k/, but not all languages have them. (Sounds are represented enclosed in slashes to distinguish them from letters of the alphabet.) Hawaiian doesn't have /t/, and Mohawk doesn't have /p/. Hupa, a nearly extinct language of California, lacks both /p/ and /k/.

**consonant** sound characterized by closure or obstruction of the vocal tract

We all know what the **consonants** and **vowels** of the English alphabet are, but what makes a sound a consonant sound or a vowel sound? What is the difference between them? The distinction has to do with how we produce them, with the restriction of airflow. A vowel sound is produced in such a way that the airstream can pass through the vocal tract without a noticeable obstruction. A consonant sound has some degree of air restriction.

**vowel** sound characterized by an open vocal tract, with no closure or obstruction

## Consonants

There are many consonant sounds in English, but there are only twenty-four consonant *phonemes* of English—the sounds that make a difference in the meanings of words to English speakers. For example, in English the sounds

**minimal pair** pair of words that differ only in one sound in the same position (e.g., *pit* /pɪt/ and *bit* /bɪt/).

**phonemic transcription** written recording of sounds using the distinctive phonemes of a language, resulting in a one-to-one correspondence between a sound and a symbol

**natural class** set of sounds that have certain phonetic features in common

RPE 3.1

**voicing** vibration of the vocal folds

/b/ and /p/ are *distinctive*, which means we hear the difference between them, and we know that the words *bit* and *pit* have different meanings. *Bit* and *pit* are a **minimal pair**, two words that differ by only a single phoneme in the same position. The version of the IPA we use in this chapter is a representation of the phonemes of English, the sounds that we recognize as distinct from one another. When we write words using the IPA, we are doing **phonemic transcription**. (It is a little confusing that we call the IPA a *phonetic* alphabet when the version we're using is really a *phonemic* alphabet. This distinction will be made clear in Chapter 4.) With phonemic transcription, there's always a one-to-one correspondence between sounds and symbols. It's important to remember that these symbols are not the same as letters and that they represent the sounds of language, not the letters of a writing system.

We will describe each consonant in terms of each of the following:

1. **Voicing** controlling the vibration of the vocal cords as air passes through to make speech sounds
2. **Place of articulation** the places in the oral cavity where airflow is modified to make speech sounds
3. **Manner of articulation** the way we move and position our lips, tongue, and teeth to make speech sounds

The ways in which we describe sounds within each of these categories—where and how the sound is made and whether there is vibration of the vocal cords—isolates a particular group of sounds, described as a **natural class** of sounds; sounds in a natural class share some set of phonetic characteristics, or phonetic features. Table 3.1 contains the consonants of English only. (We will discuss each descriptive label in Table 3.1 in the following sections.) Some of the symbols are adaptations of the IPA used by many North American linguists. The complete IPA consonant chart is shown in Table 3.2.

## Voiced and Voiceless Consonants

All consonants are either *voiced* or *voiceless*. The airflow coming out of the lungs can meet resistance at the *larynx*, or voice box. The resistance can be controlled by the different positions of and tensions in the vocal cords or vocal folds, which are two muscular bands of tissue that stretch from front to back in the larynx, behind the Adam's apple. When you're just breathing, the vocal folds are relaxed and spread apart to allow air to flow freely from the lungs. When you have the right amount of air and tension of the muscles in the cords, they vibrate when you speak. This is called **voicing**.

You can feel this vocal fold vibration when you are producing a sound that you can make last several seconds. Put your hand on your throat and make the sound [s]. Keep your hand there and switch to [z]. (We are using

Table 3.1 Consonant Phonemes of English

	Bilabial	Labiodental	Interdental	Alveolar	Palatal	Velar	Glottal
Stop	p b			t d		k g	
Fricative		f v	θ ð	s z	ʃ ʒ		
Affricate					č ĵ		
Nasal	m			n		ŋ	
Glide	ʍ w			l	y		h
Liquid				r			

= voiceless	= voiced
-------------	----------

Note: You may prefer to use the following alternative symbols for the palatal affricates and fricatives: ʃ = f, ʒ = z, č = tʃ, and ĵ = dʒ.

Table 3.2 The International Phonetic Alphabet—Consonants

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k ɡ	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			r					ʀ		
Tap or Flap		ⱱ		ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Note: Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.  
Source: Courtesy of International Phonetic Association (Department of Theoretical and Applied Linguistics, School of English, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece).

**articulators** parts of the human body involved in speech production: tongue, teeth, lips, glottis, velum, vocal folds

brackets here to simply refer to a sound without reference to whether or not it is a phoneme.) You can feel the vibration of your vocal cords—that’s voicing. It happens with other sound pairs too, but it can be harder to feel because the sounds are shorter. For example, [p] and [b] differ only in vocal cord vibration, but because the sounds are so short, it’s harder to feel them. (Beware: When we produce these sounds, we tend to add a vowel to them, making it more like “puh” or “buh.” All vowels are voiced, so you will feel the vibration during production of the vowel. Try to isolate just the [p] and [b], and you should feel the vibration during [b].)

The various parts of the mouth and throat used to make speech sounds (indicated in Figure 3.1) are called the **articulators**.

## Did You Know...?

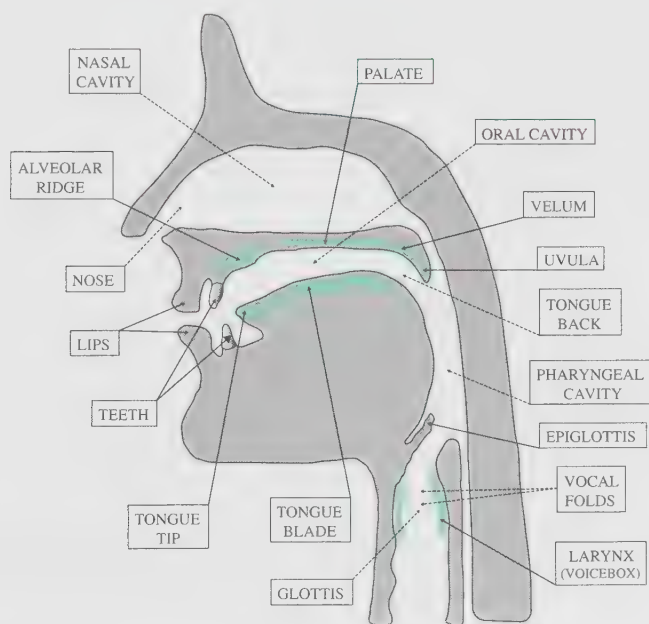


## Visible Speech

Visible Speech is a writing system invented in 1867 by Alexander Melville Bell, father of Alexander Graham Bell, the inventor of the telephone. Melville Bell was a teacher of the deaf and intended his writing system to help deaf students learn spoken language. Visible Speech was one of the first notation systems for the sounds of speech independent of a particular language or dialect and was widely used to teach students how to speak with a “standard” accent. In the 1860s, Melville Bell’s three sons, Melville, Edward, and Alexander, went on a lecture tour in Scotland to demonstrate the Visible Speech system. In the show, one of the brothers would leave the room while the others brought volunteers from the audience to speak either in another language or in a non-standard dialect. They would record the speech in Visible Speech on the board on stage. When the other brother returned, he would be able to replicate the sounds made by the volunteers by reading the Visible Speech notations. People would flock to see the Bell brothers’ performances! The modern equivalent of Bell’s Visible Speech is the International Phonetic Alphabet (IPA). In 1886, the International Phonetic Association was founded in Paris and has been the official keeper of the IPA ever since.

**Figure 3.1** Places of Articulation

Source: Courtesy of Russell Hugo.





## hwæt!

A bilabial fricative, /β/ in IPA, is not a phoneme in English but appears in most dialects of Spanish. It's similar to a /v/ but instead of top teeth on bottom lip, air comes through both lips. Try it!

## Place of Articulation

In addition to the vocal cords, all the other organs of the mouth and throat (lips, tongue, teeth) have roles in making sounds. It's also possible to describe where in the vocal tract a constriction—a tightening of muscles—is made.

### Bilabial

The bilabial (from the Latin *bi-* 'two' and *labial* 'lips') sounds are made with both lips. The sounds in this group are all made by bringing both lips together or almost together. The bilabial sounds are underlined in the following words.

Symbol	Sample Word
/p/	<u>p</u> ink
/b/	<u>b</u> all
/m/	<u>m</u> ake
/w/	<u>w</u> ash
/ʍ/	<u>wh</u> ich (for some speakers)

/ʍ/ and /w/ are also sometimes classified as *velar* or *labiovelar* because the back of the tongue is raised toward the velum during production of the consonants.

## Language Alive!

### A Disappearing Sound

How do you pronounce *when*, *where*, *what*, and *whistle*? Have you noticed that words that begin with *wh* have two pronunciations? One way is just to sound the /w/, as you would in *weather*, *watt*, *was*, and *winter*. The other way is to make a little puff of air with the *w* sound. This *w-with-a-puff* sound, called a *voiceless bilabial glide*, is disappearing in American English. Words spelled with *wh-* came from a group of words spelled with *hw-* in Old English. The <h> has been preserved in the spelling for many words—*what*, *when*, *whistle*, *whale*, *where*—but the puff of air (called *aspiration*) that accompanies the /w/ is disappearing from most speakers' pronunciation. Many speakers over the age of 55 or so maintain the sound, while most younger speakers do not have this sound at all. Its disappearance does not seem restricted to geographical region or socioeconomic factors as many other variations are. Some speakers acquire the sound later as a result of a *spelling pronunciation* (changing one's pronunciation to more closely match the spelling) so words that start with *wh-* would have /ʍ/ as the result of direct instruction in speech or acting classes. Despite these factors, the /ʍ/ does appear to be on its way out of American English.

## Labiodental

The two sounds in the labiodental (from the Latin *labio* ‘lip’ and *dent* ‘tooth’) group are made with the lower lip against the upper front teeth. The labiodental sounds are underscored in the following words.

Symbol	Sample Word
/f/	<u>f</u> ast
/v/	<u>v</u> alley

## Interdental

The two sounds in the interdental (from the Latin *inter* ‘between’ and *dent* ‘tooth’) group are made with the tip of the tongue between the front teeth. The interdental sounds are underlined in the following words.

Symbol	Sample Word
/θ/	<u>th</u> ick
/ð/	<u>th</u> ough

It can be difficult at first to distinguish between these two sounds because we aren’t used to doing so (since they are both written with <th>). The name of the /θ/ symbol is *theta*, which itself begins with the voiceless /ð/ sound, and the name for the /ð/ symbol is *eth*, which itself contains the voiced /ð/ sound.

## Alveolar

The sounds in this group are made with the tongue tip at or near the *alveolar ridge*. To find your alveolar ridge, put your tongue on the back of your top teeth and slide it upward. That bump, or ridge, is the alveolar ridge. The alveolar sounds are underlined in the following words. (It might not be obvious to you that /r/ is an alveolar sound because your tongue seems to be rather scrunched up. We’ll explain this in more detail later.)

Symbol	Sample Word
/t/	<u>t</u> ooth
/d/	<u>d</u> og
/s/	<u>s</u> ea
/z/	<u>z</u> enith
/n/	<u>n</u> ut
/l/	<u>l</u> eer
/r/	<u>r</u> ed, <u>b</u> ar

## Palatal

The sounds in this group are made with the tongue near your *palate*, the hard part of the roof of the mouth. Slide your tongue back from your alveolar ridge to find your palate. The palatal sounds are underlined in the following words.

Symbol	Sample Word
/š/	<u>sh</u> ell
/ž/	ge <u>nr</u> e, mea <u>s</u> ure
/č/	<u>ch</u> ears
/j/	<u>j</u> am
/y/	<u>y</u> ellow

The alternative symbols ʃ, ʒ, tʃ, and dʒ maybe be substituted for š, ž, č, and j, respectively.

## Velar

The sounds in this group are made with the tongue near the *velum*, the soft part of the roof of your mouth, behind the palate. The velar sounds are underlined in the following words.

Symbol	Sample Word
/k/	<u>k</u> iss
/g/	ge <u>ar</u>
/ŋ/	si <u>ng</u>

## Glottal

This is a sound made at the *glottis*, the space between the vocal folds. The glottal sound is underlined in the following word.

Symbol	Sample Word
/h/	<u>h</u> appy

The sound /h/ is sometimes classified as a glottal fricative.

There is another sound of English, though it is not typically counted as a distinct phoneme, represented by the symbol /ʔ/. It is the sound in the middle of the word *uh-oh*, where there is a stoppage of airflow at the glottis; it is, therefore, classified as a glottal stop.

### RPE 3.3

## Manner of Articulation

Each consonant sound is also described by means of its *manner of articulation*, that is, *how* the sound is made, especially with respect to airflow.

## Stops

The sounds in this group are made by obstructing the airstream completely in the oral cavity. All the symbols shown here have the same pronunciation as they do in the example words given with the places of articulation. The stop sounds are underlined in the following words.

**Symbol**

/p/

/b/

/t/

/d/

/k/

/g/

**Sample Word**

pink

balltethdogkissgeg**Fricatives**

The sounds in this group are made by forming a nearly complete stoppage of the airstream. The fricative sounds are underlined in the following words.

**Symbol**

/f/

/v/

/θ/

/ð/

/s/

/z/

/ʃ/

/ʒ/

**Sample Word**

fast

valleythickthoughseazenithshellgenre, measure

# Language Alive!

**Why Do We Spell Words with -ough?**

How many ways can you say -ough? Think of the words you know that are spelled with these letters, usually at the end. Did you ever wonder why one set of letters can be pronounced so many ways? The -gh digraph was used in Old English to represent a voiceless velar fricative, represented in IPA as [x]. This sound is still found in other Germanic languages (like the final sound in German *Bach*). However, in English the sound was lost during the Old English period, though this took place after the spelling of these words had been standardized. In some words, the [x] became [f], as in *laugh*, *tough*, *rough*, *cough*, and *enough*; in others, the sound simply disappeared, as in *though* or *night*, even though the letters didn't.

**Affricates**

The sounds in this group are made by briefly stopping the airstream completely and then releasing the articulators slightly so that friction is produced; these sounds start as stops and finish as fricatives. The affricate sounds are underlined in the following words.

**Symbol**

/tʃ/

/dʒ/

**Sample Word**cheesjag



LINGUISTICS  
IN THE NEWS

## Peter Ladefoged: Pioneer in Phonetics

When he died, word of his passing appeared in newspapers around the world—the *New York Times*, the *Los Angeles Times*, the *Daily Telegraph*, and the *Independent*, among others—and his death was reported worldwide by the Associated Press. Professor Peter Ladefoged, a remarkable man and a pioneer linguist, was mourned greatly within and outside of linguistics.

Among the many linguists who deserve mention for their impact on the field, Peter Ladefoged stands out as a true pioneer whose work has influenced the very way we look at language. Professor Ladefoged was widely regarded as the world's premier phonetician, whose life was devoted to the study of the acoustics and physiology of speech.

Born in 1925 in England and educated in Edinburgh, Scotland, Ladefoged was a member of the linguistics faculty at the University of California at Los Angeles from 1962. He established the UCLA Phonetics Laboratory, foremost of its kind in the world. Some of the areas Professor Ladefoged studied there include speech production, the electromyography of speech respiration, tongue positions of vowels, and articulatory-acoustic modeling.

Professor Ladefoged was committed to phonetics fieldwork.

In the days before laptops and more technologically advanced instruments, he carried into remote villages around the globe a camera, a tape recorder, an oscilloscope, and an instrument that measures airflow. He used these to document and describe how native speakers make the sounds of a variety of languages. One technique was to paint speakers' palates with olive oil and powdered charcoal; when the tongue came in contact with the palate during production of a particular sound, it would wipe away the charcoal, leaving a record of tongue position. Ladefoged would then photograph and catalog the tongue position. For another experiment, Ladefoged showed villagers how to put an air tube up their noses so that it would come out their mouths. One of his many works is *The Sounds of the World's Languages* (with Ian Maddieson 1996), widely considered the best catalogue to date of the consonants and vowels of some 6,000 languages.

Professor Ladefoged was a tireless advocate for the preservation of endangered languages, some of which he encountered during his years of fieldwork all over the world—in Nigeria, Botswana, Ghana, Uganda, Tanzania, Sierra Leone, Senegal, India, Yemen, Papua New Guinea, Nepal, Thailand, Brazil, Mexico, Australia,

Korea, Scotland, the Aleutian Islands, and China.

The International Phonetic Alphabet also benefited from Ladefoged's expertise when he worked on expanding it to include more sounds and making sure that it would be available in computer fonts.

Ladefoged also found time to consult on many forensics cases. In an influential short paper in the journal *Language and Speech*, he showed that, in fact, we do not recognize each others' voices with the degree of accuracy we think we do, thus shedding doubt on such testimony in legal proceedings.

Perhaps his most "popular" work was as advisor on the movie *My Fair Lady*. He taught Rex Harrison, who portrayed the fictional phonetician Henry Higgins, to indicate the correct phonetic symbols on charts and to use the nineteenth-century phonetics equipment. Ladefoged's voice is heard pronouncing the recorded vowels in the film.

For more information

<http://www.linguistics.ucla.edu/people/ladefoge> (Peter Ladefoged's life and work)

<http://www.humnet.ucla.edu/humnet/linguistics/facility/uclaplab.html> (UCLA Phonetics Lab and to see pictures of Ladefoged on the set of *My Fair Lady*)

## hwæt!

The American English /r/ is the least common of the world's phonemes, popping up in less than 5 percent of languages; the American English /m/ is the most common, occurring in 97 percent of languages.

## Nasals

The sounds in this group are made by lowering the velum and letting the airstream pass primarily through the nasal cavity. The nasal sounds are underlined in the following words.

### Symbol

/m/  
/n/  
/ŋ/

### Sample Word

make  
nut, bun  
sing

## Did You Know...?



### Mom Is Bob

When you have a cold, a word like *mom* sounds something like *bob*. Now you can explain why that is. The sounds /b/ and /m/ are made in the same way, except that when you are producing /m/, the air is pushed out through the nose rather than through the mouth. However, when your nose is plugged up, as it can be when you have a cold, very little air can go through, and the airflow defaults to your mouth. Thus, *mom* becomes *bob*, and *non* becomes *dod*.

## Glides

The sounds in this group are made with only a slight closure of the articulators—if the vocal tract were any more open, the result would be a vowel. The glide sounds are underlined in the following words.

### Symbol

/y/  
/w/  
/ɹ/  
/h/

### Sample Word

yellow  
wash  
which (for some speakers)  
happy

## Liquids

The sounds in this group result when an obstruction is formed by the articulators but is not narrow enough to stop the airflow or to cause friction. The /l/ is often described as a *lateral* liquid, because for most speakers the tongue touches the roof of the mouth near the alveolar ridge, and air flows around the sides of the tongue. As mentioned above, the /r/ is described

## RPE 3.5

as a *bunched* liquid because for most American English speakers the tongue is just that—bunched up under the palate—during the production of the sound.<sup>1</sup>

## Symbol

/l/

/r/

## Sample Word

leer

red

# Language Alive!

## Forgotten Clusters

Besides the *wh-* and the *-ough*, Old English had several other consonant combinations that don't occur in Present-Day English pronunciation, but the letters for them are preserved in the spelling. We have lost the Old English consonant combinations of /k/ plus /n/ and /g/ plus /n/, though these clusters remain in our spelling—*knee*, *knight*, *knock*, *knife*, *knit*, *knot*, *gnash*, *gnarl*, *gnome*, *gnaw*, and *gnat*. In Old English, the *kn* and *gn* at the beginning of these words were all pronounced, as were all of those so-called silent *bs* in words like *dumb*, *climb*, and *comb*.

## Why All These Distinctions?

Again, remember that the sounds in the chart in Table 3.1 are the consonant sounds used in English. Other languages have other combinations of voicing, place, and manner of articulation, resulting in distinct sounds as shown in Table 3.2. Some dialects of Spanish, for example, have a voiced bilabial fricative, /β/; German has a voiceless velar fricative, /x/; and Japanese has a uvular nasal, /N/. And Tsonga, a Southern Bantu language spoken in Mozambique, South Africa, and Swaziland, has what are called plain voiced nasals and breathy voiced nasals. Most Salish languages, spoken (or formerly spoken) in the Pacific Northwest (United States) and in lower British Columbia (Canada), have ejective stops and affricates. (*Ejectives* are voiceless consonants that are pronounced with simultaneous closure of the glottis.) Mazatec, a language of Mexico, has what are called creaky voiced consonants and breathy voiced consonants. (You can hear all of these contrasts at the UCLA phonetics site: <http://phonetics.ucla.edu/>.)

Because many of these symbols overlap with the symbols (letters) we use to spell English, learning the system is not difficult. Only the following symbols are new. The sounds are grouped according to where they occur in

1. A *bunched* *r* is sometimes called a *retroflex* *r*, though the two sounds are actually distinct. Bunched *r* is produced by having the tongue bunched in the region of the palate, while for retroflex the tongue tip is curled so that the underside faces the alveopalatal part of the roof of the mouth. The use of these appears to be quite variant for speakers of American English.

a word: at the beginning, or *word-initially*; in the middle, or *word-medially*; or at the end, or *word-finally*.

Symbol	Word-initial	Word-medial	Word-final
θ	thin, thank, thought	author, Arthur	bath, breath
ð	then, though	with'er, feather	bathe, breathe
ʃ	ship, charade	dishes, nation	fish, rash
ʒ	genre	measure, casual	rouge, garage <sup>2</sup>
č	chip, cello	riches, kitchen	ditch, which
ǰ	gem, jump	bludgeon, bridger	ridge, judge
ŋ	N/A	ringer, singing	wing, tongue
ʍ	what, which <sup>3</sup>	awhile	N/A

As previously noted, we call any of the various groupings of sounds in the consonant chart natural classes: groups of sounds in a language that share some articulatory or auditory feature(s). For a group of sounds to be a natural class, it must include all of the sounds that share a particular feature or group of features and must not include any sounds that don't. So all of the consonant chart groupings are natural classes, but some larger groupings are also natural classes. Some of these are shown in Table 3.3. For example, bilabials are a natural class, but so are *labials*, which include bilabials and labiodentals. Nasals are a natural class, but so are *sonorants*, which include not only nasals but also liquids and glides. We can distinguish sonorants, those consonants produced with a relatively open passage for the airflow (which include nasals, liquids, and glides) from *obstruents*, those sounds produced with a greater obstruction of airflow (which include stops, affricates, and fricatives). These labels are simply descriptions of groups of sounds that share some phonetic features. The groups of sounds pattern together in other languages too, not just English.

Table 3.3

Consonant Phonemes of English with Additional Natural Classes

	Bilabial	Labiodental	Interdental	Alveolar	Palatal	Velar	Glottal
Stop	p b			t d		k g	
Fricative		f v	θ ð	s z	ʃ ʒ		
Affricate					č ǰ		
Nasal	m			n		ŋ	
Glide	ʍ w				y		h
Liquid				l r			
<div> <div>= obstruent</div> <div>= sonorant</div> <div>= labial</div> <div>= labial and sonorant</div> </div>							

2. In some dialects, these words would have /j/ rather than /ʒ/.

3. These words begin with /w/ rather than /ʍ/ for most American English speakers.



hwaet!

Freudian slips are named after Sigmund Freud, the famous psychoanalyst who described such slips in his 1901 book *The Psychopathology of Everyday Life*. Freud argued that such slips came from repressed thoughts and desires.

Describing sounds in terms of natural classes is helpful for lots of reasons, as we'll see throughout the book. The natural groupings of sounds are relevant for understanding some of the things children do when acquiring language (which classes of sounds seem to be easier to acquire and which are more difficult and therefore often emerge later). Natural classes also help us understand language variation and language change. Vowels seem to shift and change over time, for example, and the shifts affect classes of vowels rather than individual sounds.

## Slips of the Tongue

Slips of the tongue provide a fascinating illustration of our unconscious knowledge of sounds and show that we are able to manipulate features of sounds, pieces of sounds smaller than the sounds themselves. First, consider a common type of slip, the exchange of whole sounds, such as in the following actual examples, in which either initial consonants or consonant clusters have been exchanged. Carefully study what is going on in each example.

### Intended Utterance

tall man  
sick fish  
take her snow pants off

### Actual Utterance

mall tan  
fick sish  
snake her toe pants off

Now consider the following examples in which vowels have been exchanged.

### Intended Utterance

pass the toast  
fill the pool

### Actual Utterance

poas the tast (/æ/ and /o/ exchange)  
fool the pill (/ɪ/ and /u/ exchange)

In these next two examples, a whole segment—that is, an entire sound—doesn't move, but a piece of that sound, a *feature*, does. See how the voicing switches in the following example.

### Intended Utterance

black cat

### Actual Utterance

plack gat

In this voicing exchange, the voicing from /b/ moves to the /k/ of *cat*, resulting in /g/. Removing the voicing from /b/ results in /p/.

The next example shows a *nasality exchange*, where the intended utterance is *banana*; only the nasal feature moves from one segment to another.

### Intended Utterance

banana

### Actual Utterance

madana

The nasality from the first /n/ in *banana* moves to the /b/, making it a bilabial nasal. Removing the nasality from /n/ results in the alveolar stop /d/.

Though we call slips of the tongue “errors,” they are actually quite systematic, affecting classes of sounds. Slips are not arbitrary; rather, they are patterned and reflect how we unconsciously organize sounds in our mental grammar.

**RPE 3.6**

## Vowels

Most languages have between three and seven vowels. English, however, has between fourteen and twenty vowels, depending on the dialect. Table 3.4 includes the vowels of most dialects of American English (though not the diphthongs—we’ll get to those soon). The position labels (high, back, etc.) are descriptions that refer to the position of the tongue in the mouth.

Though it may be slightly more difficult to determine where your tongue is with vowels than with consonants, your tongue does move. Say the words *beet*, *bet*, *bat*, and feel how your tongue lowers with each word.

Table 3.5 gives a sample word for each vowel of the chart. Keep in mind, however, that we do not all pronounce these words in the same way—there is a tremendous amount of variation in the pronunciation of vowels across dialects

Table 3.4

**Monophthongal Vowel Phonemes of English**

	Front	Central	Back
High	i ɪ		ʊ u
Mid	e ɛ	ə ʌ	ɔ o
Low	æ		a

unrounded

rounded

Table 3.5

**Monophthongal Vowels with Example Words**

	Front	Central	Back
High	i (beat) ɪ (bit)		ʊ (put) u (boot)
Mid	e (bait) ɛ (bet)	ə (tuna) ʌ (but)	ɔ (bawdy) o (boat)
Low	æ (bat)		a (body)

of English—so the word used as an example may not be accurate for your own pronunciation. It can sometimes be difficult to distinguish the mid central vowels, /ə/ and /ʌ/. /ə/ is the vowel that occurs in unstressed syllables, and /ʌ/ in stressed syllables. See if you can detect the difference when comparing the sounds of *bun* /bʌn/ and the unstressed, final vowel of *Cuba* /kyubə/. Although this distinction may seem subtle at this point—and maybe not that important—such differences become more important when we learn more about stress later in the chapter.

Another natural class distinction we make for vowels is to distinguish the *tense* vowels from the *lax* vowels. The tense vowels are made with more muscular constriction: /i/ as in *beet*, /e/ as in *bait*, /u/ as in *boot*, and /o/ as in *boat*. The rest are said to be lax. And a final natural class distinction we make with vowels is lip rounding. English has rounded vowels only for the high and mid back vowels (/u, ʊ, o, ɔ/), but other languages, like French, have rounded front vowels.

## RPE 3.7

## Language Alive!

### Do Dawn and Don Rhyme?

Say *Don* and *Dawn* out loud. Do they sound the same? How about *caught* and *cot* or *stock* and *stalk*? For some people, there is no distinction in the pronunciation of the words in each pair—they all have only the [a] vowel sound. In many dialects of English, a distinction between the vowels /ɔ/ and /a/ has been lost. This loss is known as a *merger* of sounds because the two vowel sounds have come together, which is different from a vowel shift. The *low back merger* is well established in parts of the Midwest and eastern New England, where it has been going on for generations. It is more recently found in the speech of most western United States speakers and is characteristic today of most speakers under the age of 35 anywhere west of the Mississippi.

## Diphthongs

**diphthong**  
two-part vowel  
sound consisting of  
a vowel and a glide  
in one syllable

In addition to the vowels in the English vowel chart in Table 3.5, English has phonemic **diphthongs**, two-part vowel sounds consisting of a vowel and a glide in one syllable. In many dialects, if you say *eye* slowly, you can feel the two parts of the vowel sound. Diphthongs are distinguished from two single vowels. Compare Japanese, for example, which does not have diphthongs. *Aisu*, borrowed from the English word *ice cream*, is a three-syllable word in Japanese: /a/-/i/-/su/. Its counterpart /ays/ in English combines /a/ and /i/ to make the diphthong /ay/.

Most dialects of American English have the three phonemic diphthongs /ay/ (as in *wide* and *sky*), /aw/ (as in *loud* and *cow*), and /oy/ (as in *toy* and *foil*). These phonemes are distinct from the corresponding monophthongs

## hwæt!

The standard pronunciation of the word *diphthong* is /dɪfθɔŋ/ with the <ph> as /f/, though the pronunciation /dɪpθɔŋ/ is becoming more common and therefore more accepted; *Merriam-Webster* now includes both pronunciations.

/a/ and /o/. (In some dialects, however, the /ay/ diphthong is a monophthong, so *wide* is closer to /wad/ and *sky* is something like /ska/, and the /oy/ in *foil* or *oil* is /o/, giving /fol/ and /ol/.) These sounds are distinct—no dialect has two words that differ only by those vowels; every dialect has either the diphthong /ay/ or the monophthong /a/ in a particular word, but not both. So the chart in some dialects would have all the tense vowels as diphthongs rather than monophthongs. The most common diphthongs in American English are<sup>4</sup>

/ay/ as in *wide* and *sky*  
 /aw/ as in *loud* and *cow*  
 /oy/ as in *toy* and *foil*

Many people refer to a “Southern drawl” and have the impression that Southerners speak more slowly and “draw out” many of the vowels. Though some Southern dialect speakers have some diphthongs where speakers of other dialects have monophthongs, there are also monophthongs where other dialects have diphthongs. So a word like *fire* contains a diphthong in most non-Southern dialects, /fayr/; but in some Southern dialects, it contains a monophthong, /far/. So the dialect does not, in fact, “draw out” vowel sounds any more than other dialects.

We can write just /e/ and /o/ for the vowel sounds in *stay* and *go* when transcribing our own English speech. However, these tense vowels are often pronounced as diphthongs in English—they actually have a following glide. In many dialects of English, all of the tense vowels are usually diphthongized. Thus, the vowel sounds in words like *beet* and *peak* are better transcribed as /iy/ because of the diphthongization, as in the following examples.

iy—beat	uw—boot
ey—bait	ow—boat

It is this tendency to diphthongize vowels that can make English speakers sound like they have an “American accent” when they are speaking another language that does not have as many diphthongs. Spanish, for example, has shorter monophthongs in its vowel system. Consider a word like *perro* ‘dog’. In Spanish, this is pronounced [pero], but an English speaker might pronounce it more like [peyrow], diphthongizing both of the vowels. One does this unconsciously, adopting the closest match of the sounds in one’s own language. It can take a great deal of practice to acquire the sounds of another language without substituting the sounds of one language for the closest match in the other language. This substitution is what gives us a “foreign accent.”

4. Sometimes these diphthongs are written with different symbols. Here are the alternative symbols: The /oy/ is written /ɔy/, /ɔɪ/, or /oɪ/; the /aw/ is written /æw/, /æʊ/, or /aʊ/; and the /ay/ is /aɪ/ or /ai/.



## Syllabic Consonants

In English, the liquids /l/ and /r/ and the nasals /m/ and /n/ can be *syllabic consonants*. Syllabic consonants are sounds that are identified as consonants but that may fill a vowel slot in a syllable when no vowel is present. (More on syllables follows in the final section of the chapter.) Linguists indicate a syllabic consonant by a small mark under the consonant, like so:

/r̩/ or /n̩/

In some pronunciations of words like *runner* and *ribbon*, the final syllables contain no vowel sound, only the syllabic consonant sounds:

/rʌn̩r̩/                  runner

/rɪb̩n̩/                  ribbon

Because syllabic consonants can sometimes be confusing for beginning transcribers, and because it can be difficult to determine whether a vowel is present in a given syllable or not, you may find it easier when transcribing to use either /ər, əl, əm, ən/ or /r̩, l̩, n̩/ to represent these syllabic sounds.

/ʃʊgər/ or /ʃʊg̩r̩/                  sugar

/bɜrd/ or /bɜrd̩/                  bird

/bʌtən/ or /bʌtn̩/                  button

Be sure to use syllabic consonants in transcription *only* when the consonant is syllabic. The liquids and nasals can be “regular” nonsyllabic consonants too. (So, though /n/ is syllabic in *ribbon*, it is not in *nonsense* or *nine*.)

### RPE 3.9

## Other Vowel Distinctions

Another way in which vowel sounds can be distinctive is with respect to *length*, that is, the actual duration of the sound. Some speech sounds are longer than others. In English, a vowel preceding a voiced consonant is longer than the same vowel before a voiceless consonant. Can you hear the length difference in word pairs such as *bit/bid* and *beat/bead*? The vowels that precede the voiced consonants are longer—actually last longer—than the ones preceding the voiceless consonants.

Though we have length variations in English, they are not distinctive; that is, the variation in length of a vowel sound does not change a word’s meaning. (So Table 3.4 does not indicate long vowels as distinct from short vowels.) So, there’s not one word [bɪt] and another one [bɪ:t] (where : indicates a longer duration of a vowel sound).

Length is distinctive in other languages, however. In Finnish, the difference in vowels and consonants can make a difference in the meaning of a word, as the following three sets of examples illustrate:

[muta]	mud
[mu:ta]	some other

[mut:a]	but
[tapan]	I kill
[tapa:n]	I meet
[tule]	come!
[tule:]	comes
[tu:le:]	is windy

Japanese also has consonant and vowel length distinctions, as these three sets of examples show:

[to:kai]	collapse
[tokai]	city
[kokaku]	a customer
[ko:kaku]	wide angle
[ko:to:]	oral, verbal
[koto:]	an isolated island
[kotto]	antique

Even though English doesn't have long consonants as phonemes, English speakers can get an idea of what the long (also called *geminate*) consonants are like by comparing the English words *bookend* and *bookcase*:

<i>bookend</i>	/bʊkɛnd/
<i>bookcase</i>	/bʊkɛs/

The /k/s in the compound word *bookcase* are usually pronounced as one long, extended /k/ rather than either a single /k/ or two separated /k/s. Length, however, is not distinctive in English, so there is not one word /bʊkɛnd/ and another word /bʊkkɛnd/; consonant length can never make the difference in the meaning of a word. Another word that allows you to hear this “length” in a consonant is the word *except*, which sounds as if it has two occurrences of /s/, one from the /ks/ of <x> and one from the /s/ of <c>: /ɛkssept/.

RPE 3.10

RPE 3.11

## Language Alive!

### Double Is Not Long

Old English also had phonemically long consonants. These were typically indicated in the spelling system by doubling the letter, so there were pairs such as *bed* ‘prayer’ and *bedd* ‘bed’, and *fȳlan* ‘to befoul’ and *fȳllan* ‘to fill.’ This phonemic distinction has dropped out of the language now, and double letters no longer reflect a different sound; for example, we would pronounce *bed* and *bedd* the same way, just as we would pronounce *Jen* and *Jenn*, both possible spellings for short versions of *Jennifer*, the same way.

**tone** variation in pitch that makes a difference in the meaning of words

Another way in which language sounds are distinctive is with respect to **tone**. In many languages, the pitch at which the syllables in a word are pronounced can make a difference in the word's meaning. These are called *tone languages*, and they include Thai, some Chinese dialects, Vietnamese, some African languages, and some South American Indian languages.

Mandarin Chinese has four tones, illustrated in these minimal pairs:

[ma]	mother	pronounced with a high level tone
[ma]	hemp	pronounced with a high rising tone
[ma]	horse	pronounced with a low falling rising tone
[ma]	scold	pronounced with a high falling tone

The following examples are from the Nupe language, spoken in Nigeria, which has three tones, indicated by the diacritic marks ` and ´. Vowels without a diacritic are mid tones.

ebà	place	èdù	Niger river
eba	penis	èdu	kind of yam
ebá	husband	edu	thigh
edú	kind of fish	edù	deer

**stress** relative emphasis given to syllables in a word

All aspects of languages are continually changing, and it is well documented that some tonal languages have changed into nontonal languages. Such languages generally develop a **stress** system as they lose the tonal distinctions. Swahili is one such language. Korean is in transition; currently, some dialects of Korean are tonal, and others, such as the variety of Korean spoken in Seoul, are not.

**nasalization** production of a speech sound with the velum lowered so that most of the airflow passes through the nose rather than the mouth

Another way in which vowels are distinctive across languages is with respect to **nasalization**. When a sound is nasalized, the air passes through the nasal cavity (the nose). This phonological feature is not distinctive in English; though we have nasalized and nonnasalized vowels, nasalization cannot make the difference in the meaning of an English word. Nasalization of vowels is, however, distinctive in some other languages, such as Navajo, Ijo (spoken in Nigeria), and French. For example, in French, *lot* 'prize' is pronounced /lo/, and *longue* 'long' is pronounced /lõ/, where the diacritic ~ marks the nasalization.

Navajo has only four vowels, /a, e, i, o/, which may contrast in length (so there are short and long versions of each vowel, indicated by doubling: a vs. aa), nasalization (so: a vs. ạ, where the "hook" on the <a> indicates nasalization in Navajo), and tone (a vs. á).

### RPE 3.12

## Vowel Shifts

As noted already, vowels vary greatly among English dialects, much more than consonants do. Some of the better-studied vowel variations and vowel shifts are discussed briefly here.

## The Great Vowel Shift

During the Middle English period, the seven tense vowels of the predominant dialect in the language underwent a shift known now as the Great Vowel Shift. It was a gradual process that began in Chaucer's time (the fourteenth century) and continued through the time of Shakespeare (the early seventeenth century). Table 3.6 illustrates the shift: One vowel's articulation point was raised, and this shifted the next vowel up; however, the highest vowels had no higher place to go, so those two vowels, /u:/ and /i:/, became diphthongs. So the early English speakers lived in a /hu:s/, milked a /ku:/ for /swe:t/ milk. Some English speakers, primarily in Scotland, still maintain the pre-Great Vowel Shift pronunciation. The table illustrates all of the shifts and sample words' preshift and postshift pronunciations.

One of the primary reasons that this vowel shift has become known as the 'Great' Vowel Shift is that it profoundly affected English phonology, and these changes coincided with the introduction of the printing press; William Caxton brought the first mechanized printing press to England in 1476. Prior to mechanized printing, words in the handwritten texts had been spelled pretty much however each particular scribe wanted to spell them, according to the scribe's own dialect. Even after the printing press, however, most printers used the spellings that had begun to be established, not realizing the significance of the vowel changes that were under way. By the time the vowel shifts were complete in the early 1600s, hundreds of books had been printed that used a spelling system that reflected the pre-Great Vowel Shift pronunciation. So the word *goose*, for example, had two <o>s to indicate a long /o/ sound, /o:/—a good, phonetic spelling of the word. However, the vowel had shifted to /u/; thus *goose*, *moose*, *food*, and other similar words that we now spell with <oo> have mismatched spelling and pronunciation.

Table 3.6 The Great Vowel Shift

		Front	Central	Back	
High	[fi:f] → [fayf] 'five'	i: ↑		u: ↑	[hu:s] → [haws] 'house'
Mid	[swe:t] → [swit] 'sweet' [dɛ:g] → [de] 'day'	e: ↑ ε:		o: ↑ ɔ:	[fo:d] → [fu:d] 'food' [stɔ:n] → [ston] 'stone'
Low			ay      aw	a:	[na:mə] → [nem] 'name'



Why didn't printers just change the spelling to match the pronunciation? Because by this time, the increased volume of book production, combined with increasing literacy, resulted in a powerful force against spelling change. We discuss spelling more in Chapter 13.

Other vowel shifts are going on all the time, in all dialects of English, all over the world. A large-scale project to create a dialect atlas of the United States, based on pronunciation and including a detailed discussion of vowel shifts, is underway at the University of Pennsylvania under the direction of linguist William Labov. Figures 3.2 and 3.3 are taken from an online report of this work ([http://www.ling.upenn.edu/phono\\_atlas/home.html](http://www.ling.upenn.edu/phono_atlas/home.html)), which gives a detailed account of many regional dialects.

### RPE 3.13

## The Northern Cities Chain Shift

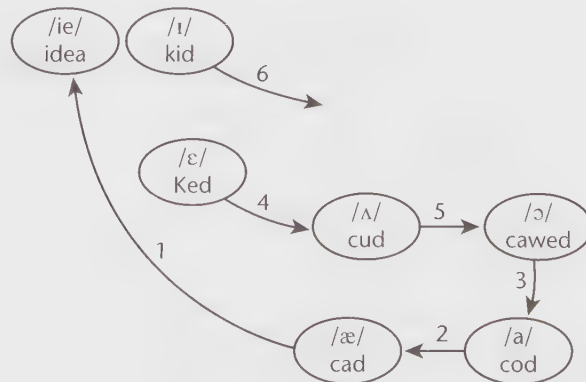
The Northern Cities Chain Shift is a series of changes in the vowels of the variety of English spoken in such cities as Chicago, Detroit, Rochester, Cleveland, and Buffalo. Each vowel shifted to a new place of articulation, thus pushing the next vowel along to yet another new place of articulation, just as the Great Vowel Shift did. The arrows in the vowel chart in Figure 3.2 indicate the direction of the shift of these vowels in certain words for the majority of speakers in these major, inland, Northern urban regions.

## The Southern Vowel Shift

Another vowel shift has been going on among some speakers, primarily in the southeastern United States, for quite some time. The vowel shifts shown in

**Figure 3.2** The Northern Cities Chain Shift (Vowels with Examples)

Source: William Labov, *The Organization of Dialect Diversity in North America*, paper presented at the Fourth International Conference on Spoken Language Processing, Philadelphia, PA, October 6, 1996. Updated at [http://www.ling.upenn.edu/phono\\_atlas/ICSLP4.html](http://www.ling.upenn.edu/phono_atlas/ICSLP4.html).



**Figure 3.3** The Southern Vowel Shift

Source: William Labov, *The Organization of Dialect Diversity in North America*, paper presented at the Fourth International Conference on Spoken Language Processing, Philadelphia, PA, October 6, 1996. Updated at [http://www.ling.upenn.edu/phono\\_atlas/ICSLP4.html](http://www.ling.upenn.edu/phono_atlas/ICSLP4.html).

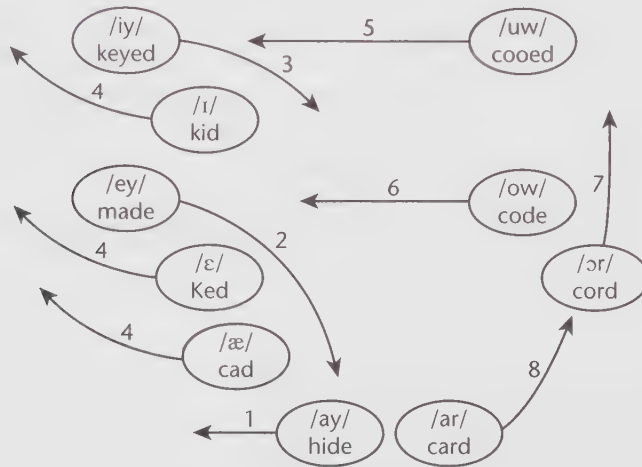


Figure 3.3 involve seven vowels, the same number of vowels involved in the Great Vowel Shift.

The fronting of the back vowels /u/ and /o/, as shown here, is taking place in the speech of many young people, regardless of region or other dialectal factors; it is quite widespread throughout the western United States. A word like *boot* /but/ is beginning to be pronounced more forward in the mouth—try it!

Another vowel shift, called the Northern California Vowel Shift, is being investigated by linguists. You can explore this shift in the ‘Review, Practice, and Explore’ section of this chapter.

The variations among the consonants across dialects are quite few compared to the vowel variations. Some Hispanic English dialects vary in the place of articulation of the alveolar consonants; they are dental rather than alveolar. Some dialects have no /ð/, replacing it with /d/, as in *this* /dɪs/ or *mother* /mədər/. There are certainly other variations involving consonants, such as the lack of [r] following vowels in many dialects (“Pahk the car in Hahvid Yahd”), but these are phonological rather than phonetic variations. In the next chapter, which deals with phonology, you will come to better understand this distinction.

## Phonemes and Allophones

**aspiration** puff of air that accompanies the initial voiceless consonants in such words as *pat* and *tick*

**allophone** predictable phonetic variant of a phoneme

As you transcribe words, you will likely notice that some details are difficult to represent with the symbols we have learned. As we will discuss throughout the next chapter, sounds vary depending on what other sounds occur around them. Consider the /p/ of English, for instance. Hold your hand or a piece of paper in front of your mouth and say the words *pat* and *spat*. When you pronounce *pat* you should feel a puff of air on your hand that you do not feel when you say *spat*. Making this puff of air is called **aspiration**. The difference in the way the two [p]s are pronounced results in two phonetically distinct [p]s, but native speakers are not even aware of that (unless they've had a linguistics class!) because the differences in those two sounds don't matter in English—they never occur in the same position. The [p] with the aspiration always occurs at the beginning of a stressed syllable; the other [p] occurs everywhere else.

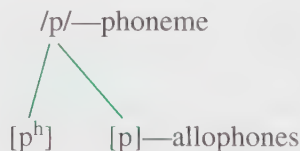
The consonant chart in Table 3.1 has only one /p/. That's because there is only one /p/ phoneme in English. However, we'll see that it's useful to indicate that there are two **allophones** of /p/—two predictable pronunciations of the phoneme /p/—and it is completely predictable when we get one and when we get the other. Let's see how this works.

Consider the data in the following two columns, and determine whether you have the aspiration or not on each of the /p/s:

A	B
pat	spell
pickle	special
Peter	spare

The words in column A all have an aspirated [p]. Those in column B have an unaspirated [p].

Here's one way to illustrate this fact:



The superscript *h* in [p<sup>h</sup>] indicates the aspiration. This aspiration of the [p] occurs automatically in English when the /p/ is in a certain position with respect to other sounds and is what we will call a *phonological rule* of English. The following is one way to formally write the rule (the generalization) for the preceding data with the /p/s:

/p/ becomes aspirated when it occurs at the beginning of a stressed syllable. Otherwise, it is unaspirated.

The aspiration rule of English applies not only to /p/ but to the natural class of voiceless stops in English, /p/, /t/, and /k/. So, the /t/ of *tack* is aspirated, but the /t/ of *stack* is not. The /k/ of *cat* is aspirated, but the /k/ of *scat* is not. However, in certain other languages, aspiration does make a difference to speakers and can result in distinct phonemes. We'll see that phonemes are psychological constructs that vary depending on a person's native language. We continue our discussion of phonemes and allophones in the next chapter.

## RPE 3.16

## Accent on Product Naming

The marketing, advertising, and sales of some very profitable companies and products owe some of their success to the work of linguists. The name of a company might have to convey the company's personality, expertise, track record, innovativeness, status, and so on. The name of a product usually has to carry a lot of information that gives an impression favorable enough to make people want to buy it. At the very least, its name should not deter people from buying it! Many linguists work at companies that specialize in naming things (companies, buildings, parks, campaigns, and such products as food, medication, electronics, fashion, cars—just about anything you can think of).

Researchers have showed conclusively that certain sounds convey specific attributes better than others. They can accurately predict the semantic associations likely to result from sound and spelling patterns and can then employ those sounds to create names. Answer these questions from Lexicon Branding's original pilot study. Do you agree with the survey findings?

- Which headache tablet sounds faster: Pavil or Bavi?
- Which computer sounds more compact: Gortan or Kortan?

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- Which car sounds faster: Sarrant or Tarrant?
- Which car sounds faster: Faldon or Valdón?
- Which computer sounds faster: Taza or Paza?
- Which car sounds more dependable: Bazia or Vazia?
- Which computer sounds more dependable: Gamza or Damza?

The results for most respondents: Pavil, Kortan, Sarrant, Valdón, Taza, Bazia, Damza. The researchers found that most English speakers made the following associations:

- Voiceless stops /p, t, k/ carry a greater connotation of speed than do voiced stops /b, d, g/.
- Fricatives /v, f, s, z/ connote speed better than stops /b, p, d, t/.



- Voiced fricatives /v, z/ connote speed better than voiceless fricatives /f, s/.
- Stops /b, p, t, d/ connote dependability better than fricatives /v, f, s, z/.
- Alveolars /t, d, s, z/ connote speed better than labials /p, b, f, v/.

Lexicon Branding (Sausalito, California) has a team of fifty-five linguists working in thirty-eight countries. They conduct research and ensure that the names are acceptable to speakers of languages in countries where the products might be sold. Catchword (Oakland, California, and New York City), another branding company, also recognizes the importance of knowledge of sounds. “When developing names . . . for the global market, we’re keenly aware of pronunciation issues, such as consonant clusters, which are difficult for Japanese speakers, and vowel sounds that don’t exist in Arabic. Our names generally do not require translation; they’re pronounceable, if not meaningful, in every required language” (<http://www.catchwordbranding.com/>).

Factors other than *sound symbolism*—images, qualities, and emotions unconsciously

associated with sounds—enter into product naming, too. Will Leben, director of linguistics at Lexicon and professor of linguistics at Stanford University, describes the process of naming the BlackBerry PDA. Someone at the company noted that all the buttons on the PDA were like seeds, so they began brainstorming fruit words. Someone suggested *strawberry*, but the sounds in *straw-* didn’t convey the right message and seemed too ‘slow’; *berry* was good, though, with the /b/ connoting both speed and dependability. Also, there is the ‘friendliness’ of the fruit word, good in a technical product so as not to make it intimidating, the ‘lightheartedness’ of the alliteration, the symmetry of the two /b/s, and the diminutive quality provided by the final <y>, suggesting compactness.

*For more information*

Lexicon. <http://www.lexicon-branding.com/index.html>.

Catchword. <http://www.catchwordbranding.com/>.

## Summary

In this chapter, you have learned how linguists describe and categorize speech sounds—sounds that we produce effortlessly, without even thinking about it. You have learned a system of transcribing speech using a version of the International Phonetic Alphabet, and you have learned how speech sounds are made and how we can distinguish among sounds based on their phonetic features, distinguishing them by natural class. We have discussed how sounds change over time (the Great Vowel Shift), how they are changing right now (the Northern Cities Vowel Shift), and how these shifts and other sound changes happen in systematic and patterned ways. We have also glimpsed some of the ways in which these English sounds differ from those of other languages. In the next chapter, when we begin our study of phonology, we will see how the phonemes introduced in this chapter are combined into larger units by systematic rules.

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## Review, Practice, and Explore

### RPE 3.1 Describing Consonant Sounds

Using Table 3.1, describe the following sounds in terms of voicing, place of articulation, and manner of articulation. Example: /p/ is a voiceless bilabial stop.

- |        |         |
|--------|---------|
| 1. /f/ | 7. /ŋ/  |
| 2. /h/ | 8. /b/  |
| 3. /g/ | 9. /š/  |
| 4. /θ/ | 10. /č/ |
| 5. /n/ | 11. /t/ |
| 6. /r/ | 12. /m/ |

### RPE 3.2 Voiced or Voiceless?

Come up with four minimal pairs of words in which a sound differs only in voicing status; for example: *pin* /pɪn/ and *bin* /bɪn/. Refer to the vowel chart in Tables 3.4 and 3.5 for help with transcribing vowels.

### RPE 3.3 Different Places of Articulation

Looking at the consonant chart in Table 3.1, come up with three sets of three words, the words in each set differing only in the place of articulation of one of the sounds in the same position. For example, in the words *pit*, *tit*, *kit*, /pɪt/ /tɪt/ /kɪt/, the initial sounds are all voiceless stops, but /p/ is bilabial, /t/ is alveolar, and /k/ is velar.

### RPE 3.4 Different Manners of Articulation

Looking at the consonant chart in Table 3.1, come up with three sets of two words each that differ only in the manner of articulation of one of the sounds in the same position. For example, in the words *ship* and *chip*, /ʃɪp/ /tʃɪp/, the initial sounds are a voiceless palatal fricative /ʃ/ and a voiceless palatal affricate /tʃ/. The differing sounds do not have to occur at the beginning of the word.

**RPE 3.5** Place and Manner Natural Classes

For each group of words, write a three-part description (voicing, place of articulation, and manner of articulation) for the underlined sound in each word. Then determine which single natural class of sounds describes the underlined sounds in each group.

Group 1	Group 2	Group 3	Group 4
<u>p</u> izza	<u>th</u> ink	<u>f</u> avorite	<u>s</u> ing
<u>m</u> alice	<u>th</u> ough	<u>s</u> oap	<u>b</u> ark
<u>b</u> ashful	<u>thr</u> ash	<u>v</u> aporize	<u>g</u> et
<u>w</u> ash	<u>th</u> istle	<u>z</u> enith	
<u>f</u> ather	<u>th</u> ere	<u>sh</u> ape	
<u>v</u> alise		<u>th</u> atch	

**RPE 3.6** Oops! That's Not What I Meant!

Slips of the tongue involve accidental manipulation of the building blocks of language. The slips can be phonetic, phonological, morphological, or syntactic. In the following phonetic slips, either a whole phoneme or only a piece—a feature—of each sound is involved. Describe what happens from the intended utterance to the actual utterance and why you think each slip occurs.

Example:	Intended Utterance	Actual Utterance
	black cat	plack gat

The voicing from /b/ moves to the /k/ of *cat*, resulting in /g/. Removing the voicing from /b/ results in /p/. This switch provides evidence for the features of these phonemes and for a speaker's ability to manipulate those features unconsciously.

	Intended Utterance	Actual Utterance
a.	pity the new teacher	mity the dew teacher
b.	mismatched	mitchmashed

(Before attempting an analysis, transcribe this one to see the correct phonemic representation.)

c.	bad, naughty kitten	mad, daughty kitten
d.	coin toss	toin coss

**RPE 3.7** Fiddle-Faddle!

Why do you think we say *fiddle-faddle* and not *faddle-fiddle*? Why is it *ping-pong* and *pitter-patter* and not *pong-ping* and *patter-pitter*? Here are some more:

dribs and drabs, spic and span, riffraff, zigzag, singsong, mishmash, ding-dong, crisscross, see-saw, hee-haw, flip-flop, hippity-hop, ticktock, eeny-meeny-miney-moe, bric-a-brac, clickety-clack, splish splash, dillydally, blither blather, tip-top, chitter chatter, shim sham, flimflam

Come up with more examples of similar kinds of singsong (there's one!) phrases. In the examples given and in your own, which vowel sounds seem to come first? Why do you think these vowels come before others? Is this pattern likely to hold for other languages? Why or why not?

**RPE 3.8 Mono or Di?**

Recall that whether vowels are diphthongs or monophthongs varies quite a bit across English dialects. Write the following words in phonemic transcription of your pronunciation. (It might be easier to listen to someone else's pronunciation, since it can be difficult to reflect on your own.)

- |           |           |
|-----------|-----------|
| a. foul   | f. tine   |
| b. bawdy  | g. frame  |
| c. coffee | h. fire   |
| d. toil   | i. taught |
| e. reign  |           |

**RPE 3.9 Syllabic Consonants**

The transcription of words with syllabic consonants can cause some trouble when you are just learning to transcribe. Transcribe the following words phonemically, using syllabic consonants where relevant. Remember that not all instances of /r/, /l/, /m/, and /n/ are syllabic consonants.

- |             |            |
|-------------|------------|
| a. purple   | e. bottom  |
| b. bludgeon | f. cycle   |
| c. furtive  | g. cursive |
| d. kittens  |            |

**RPE 3.10 Phonemic Transcription**

A. Transcribe the following words using phonemic transcription:

- |            |             |              |
|------------|-------------|--------------|
| 1. monkey  | 7. badger   | 13. shaved   |
| 2. though  | 8. think    | 14. wiggle   |
| 3. crabs   | 9. useful   | 15. huge     |
| 4. fangs   | 10. uncle   | 16. prestige |
| 5. physics | 11. measure | 17. cured    |
| 6. thanks  | 12. pinch   | 18. wart     |

B.

- Write your name in phonemic transcription.
- Write a sentence in phonemic transcription.

**RPE 3.11 Reverse Phonemic Transcription**

Write the following sentences in regular English orthography. Keep in mind that this transcription may not match your pronunciation of some of the words. Also keep in mind that some of these sentences might not actually make a whole lot of sense—we don't want context to give away the words, so some of them are a bit, well, wacky.

- /ə maws slɛpt θru may lekʃər əbawt bəkəts ʃʌmpiŋ ɪntu ðə læps əv bebz/
- /ðə mʌnθ əv eprɪl wʌz pɹɪkyulərli lʌvli dont yu θɪŋk/
- /ɪmæʃnəri kričərz lɛpt tɔrd ʌs frəm al dɪrɛkʃənz/
- /gʊlz ænd wɪčəz mayt rɒmp ðru red skwɛr ɔn sʌnde/
- /mɪsəz bizli wakt kwɪkli dawn ðə krʊkɪd bɔrdwʌk/
- /ðɪs ɛgzæmpəl ɪz ɛntendɪd tu bi mɔr kənfyuzɪŋ/



**RPE 3.12** Who Has “Creaky Voice”?

In a phonetic feature of voicing known as *creaky voice* (also called *laryngealization* and *vocal fry*), only the front part of the vocal folds are vibrating, giving a very low frequency of vibration. Sometimes you can even hear vibration of individual vocal folds. This feature seems to be on the rise in American English speakers; some researchers suggest that it happens more frequently in young people. It also appears to happen more at the end of an utterance. Look up ‘creaky voice’ online and listen to an audio recording of it. (There’s one at [http://seattlepi.nwsources.com/local/225139\\_nwspeak20.html](http://seattlepi.nwsources.com/local/225139_nwspeak20.html).)

In some languages, creaky and noncreaky sounds are distinctive; Mazatec, a language of Mexico, has consonants and vowels that can be creaky or noncreaky (laryngealized or not) and that can make a difference in the meaning of a word. Hear this contrast at the following link: <http://hctv.humnet.ucla.edu/departments/linguistics/VowelsandConsonants/vowels/chapter12/mazatec.html>.

Do you think you or any of your friends use creaky voice? If so, do you do it all the time or more often in particular circumstances? Do you agree that it happens more with young people than with older people? Consider these questions and any others this leads you to. Summarize your discussion.

**RPE 3.13** The Great Vowel Shift

Consider the following words reflecting Middle English pronunciation before the Great Vowel Shift took place. Determine the Present-Day English pronunciation of these words after the Great Vowel Shift. (The symbol : indicates a long vowel and can be ignored for this exercise.)

- |             |           |
|-------------|-----------|
| a. /lu:s/   | e. /gɔ:t/ |
| b. /me:d/   | f. /ro:t/ |
| c. /kni:xt/ | g. /du:n/ |
| d. /bla:mə/ |           |

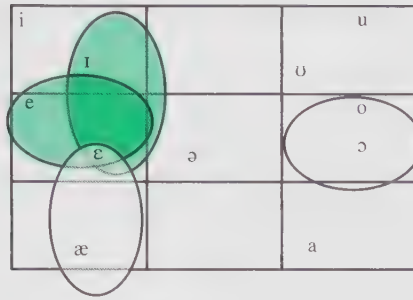
**RPE 3.14** Northern California Vowel Shift

Read about the Northern California Vowel Shift at <http://www.stanford.edu/~eckert/vowels.html>. This project also focuses on the adolescent peer social order in order to understand how it emerges from a child social order, how gender differences in phonology come about, how adolescent linguistic styles emerge from kid talk, and how to theorize style as social practice. Read about this research and write a one-paragraph response to it.

**RPE 3.15** Perceptions Based on Pronunciation

Consider the following common pronunciations among varieties of North American English.

agate	/ɛgət/—Northwest and Midwest /ægət/—elsewhere
both	/bɔθ/—Northwest and Midwest /boθ/—elsewhere
can’t	/kent/—South /kænt/ or /kənt/—elsewhere
pen	/pɪn/—South /pɛn/—elsewhere



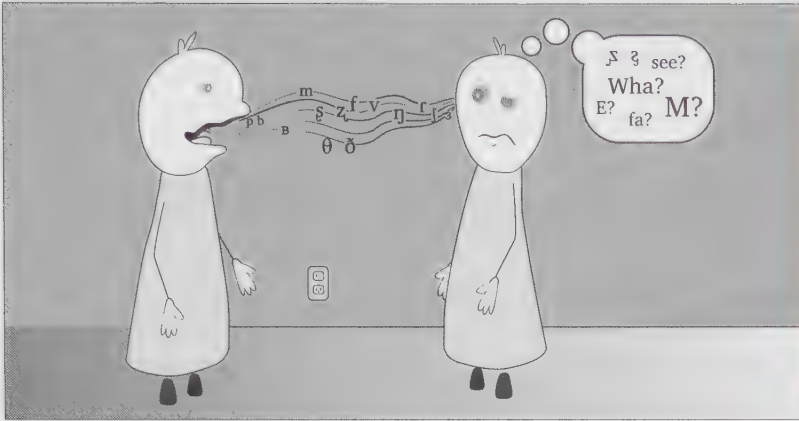
Discuss the variations, and determine which is most noticeable. What are your perceptions of people who pronounce these words either one way or the other?

The variation in the vowel sounds is only one step on the vowel chart, as indicated by the ovals, but we nevertheless find some distinctions more noticeable than others, and these are typically more stigmatized. Are your opinions about each variant linguistically or socially determined? Explain.

### RPE 3.16 Is There a "Right" Way to Say It?

Think of some words that have more than one common pronunciation (*coupon*, *pajamas*, *apricot*, *economic*). Practice transcribing by writing each pronunciation in phonemic transcription. After you have done the transcription, discuss the varying pronunciations and the characteristics you associate with each pronunciation. What factors (age, race, gender, class, ethnicity, education, etc.) correlate with each pronunciation, and why do you think you have those associations? Are there some words for which you do not have a preferred pronunciation? Are there some words for which you adopt the pronunciation of the person you're speaking with?





# Phonology: The Sound Patterns of Language

## Key Concepts

- Phonology is the study of the sound system and the processes we use to discover the unconscious systems underlying our speech.
- Linguistic sounds are not generally used in isolation; we string sounds together to make words and sentences.
- Rules also govern pieces bigger than single sounds, including the stress system of words and phrases and the structure of syllables.
- Pitch and loudness can affect meaning in systematic ways.

## Did You Know . . . ?

Babies Are Better at Language!  
 Invented Spelling  
 Where Do You Get Tenashoes?  
 Abbish versus Ubbby Dubby

## Language Alive! Long-Lost English Allophones

Where the Heck Is <h>?  
 What's Wrong with Aks?  
 Going Nucular

## Linguistics in the News Tone Languages and Perfect Pitch

## Accent on Linguistics and Reading

## Chapter at a Glance

### Phonemes and Allophones

#### Assimilation Rules

Vowel Assimilation  
 Alveolar Nasal Assimilation  
 Nasal Assimilation  
 Palatalization  
 Voicing Assimilation

#### Dissimilation Rules

Dissimilation of Liquids and Nasal Sounds  
 Dissimilation of Fricative Sounds

#### Insertion Rules

Insertion of Vowels  
 Insertion of Consonants  
 Insertion of Voiceless Stop  
 Insertion of /y/

#### Deletion Rules

Deletion of /r/ after Vowels  
 Deletion of Fricative Next to Fricative  
 Deletion of Like Sounds or Syllables  
 Simplification of Consonant Clusters

#### Fronting Rules

Fronting of Velar Nasal to Alveolar Nasal  
 Fronting in Child Language  
 Fronting of /x/

#### Exchange Rules

Exchanging /s/ and a Consonant  
 Exchanging /r/ and a Vowel  
 Exchanging Syllable Onsets

#### Multiple-Rule Processes

#### Suprasegmentals

Syllables  
 Stress  
 Intonation

#### Summary

#### Sources and Resources

#### Review, Practice, and Explore



*A linguistic system is a series of differences of sound combined with a series of differences of ideas.*

—FERDINAND DE SAUSSURE

**phonology** system of rules underlying the sound patterns in a language

In Chapter 3, we learned about the sounds of English in isolation. In reality, however, linguistic sounds are not generally used in isolation; we string sounds together to make comprehensible words and sentences. When sounds are used together, they affect and influence each other in predictable and systematic ways. Recall that **phonology** is the study of the sound system and the ways we can discover the unconscious systems underlying speech. You will be surprised at the vast amount of unconscious knowledge you already possess about the sounds of your language and how they interact.

You've seen how to distinguish and represent the sounds of English. When we speak, however, we don't utter each sound separately with a neat break in between. The word *fact*, for example, is not /f/ + /æ/ + /k/ + /t/; rather, each sound blends into the next. Sometimes that blending leads to neighboring sounds affecting one another. When that happens, it does so in predictable and rule-governed ways. In this chapter, we also examine aspects of phonology bigger than single sounds; we explore syllables, variation in pitch, and variation in loudness to understand how these processes can affect meaning and how and why the rules change and vary.

Recall the discussion of phonemes versus allophones from Chapter 3. You learned that the environment in which a sound occurs can affect the way it is produced. For example, we saw that voiceless stops that occur at the beginning of a stressed syllable are aspirated (as in *top* /tap/), and they are unaspirated when they occur in other positions (as in *stop* /stap/).

**phonological rule** description of when a predictable variation of a particular sound occurs

All of these elements in the sound system are governed by rules. Our main task in this chapter is to explore these **phonological rules** to understand how and why sounds affect each other and to understand our unconscious knowledge underlying these processes.

## Phonemes and Allophones

Remember that each language has its own set of phonemes. In fact, in some languages the voiceless aspirated and unaspirated bilabial stops are the separate phonemes /p<sup>h</sup>/ and /p/, respectively. To speakers of Hindi and Korean, for example, these two sounds sound as different as /p/ and /b/ do to English speakers, and the two sounds can make a difference in

the meaning of a word. For instance, in Korean, /p<sup>h</sup>al/ means ‘arm’, while /pal/ means ‘foot’. The same aspiration contrast exists for the other voiceless stops, /t/ and /k/.

t <sup>h</sup> al	mask	k <sup>h</sup> al	knife
tal	moon	kal	will go

The following chart compares Korean and English /t/s.

Phoneme	English	Sound/Allophone	Korean	Phoneme
/t/	[t <sup>h</sup> æk] (tack)	[t <sup>h</sup> ]	[t <sup>h</sup> al] (mask)	/t <sup>h</sup> /
	[stæk] (stack)	[t]	[tal] (moon)	
/d/	[dæk] (dock)	[d]	[mandu] (dumpling)	/t/

Hindi’s aspiration distinctions are given here, illustrating that the aspiration on a voiceless stop makes a difference in the meaning of a word:

p <sup>h</sup> al	knife blade
pal	take care of
k <sup>h</sup> al	skin
kal	era
t <sup>h</sup> al	plate
tal	beat
t̪ <sup>h</sup> al	wood shop
t̪al	postpone

Instead of an alveolar stop /t/ like English has, Hindi has a voiceless dental stop /t̪/, in which the tongue is on the back of the teeth rather than the alveolar ridge, and a voiceless postalveolar stop, /ť̪/. Both of these have aspiration contrasts that result in phonemically distinct sounds.

We can think of phonemes as our unconscious representations of the phonological units of a language. Though we aren’t consciously aware of the phonemes of our language, we are perfectly aware unconsciously and are able to follow the “rules” of the phonology of the language effortlessly. Linguists sometimes say that phonemes are the “psychologically real” sounds of a language and allophones are the actual sounds. Put another way, phonemes are the sounds we think we are physically saying, and allophones are what we are actually saying.

Take, for example, the phoneme /t/ in English. If you are asked whether there is a /t/ in the word *Batman*, you most likely would say “of course!” But now pronounce the word—and you can see that although we

**flap** manner of consonant articulation similar to a stop, but with no air pressure build-up and therefore no air release

are quite certain there is a /t/ in this word, we don't pronounce it as we would in the word *top*. So what's going on? Well, the /t/ of English has a set of allophonic variations. For American English speakers, the /t/ in such words as *little*, *battle*, *butter*, and *writer* is a sound called a **flap**, indicated by the symbol [ɾ]. This sound occurs between vowels when the second vowel is unstressed. (We'll return to a discussion of stress later in the chapter.) So if we indicate the phonetic detail, *little* would be transcribed [lɪɾəl]. In many British dialects, the /t/ in such words is not a flap but is instead a glottalized stop [tʰ], [lɪtʰl] or a glottal stop [ʔ], [lɪʔl]. For many American English speakers, the /t/ in a word like *Batman* is glottalized as well, /bætʰmæn/. Also, as previously discussed, in all English dialects /t/ becomes aspirated when it is at the beginning of a stressed syllable, as in *tack* [tʰæk]. However, a speaker *thinks* of all of these sounds simply as /t/ and doesn't pay attention to the phonetic differences because they don't matter in English.



We will not go through a complete list of the allophonic variations for each phoneme. Simply be aware that such variations exist and also that some phonemes have just *one* principal allophone.

Let's consider the distinction between the sounds /l/ and /r/. In English, these are distinct phonemes, and to English speakers, then, the sounds seem quite different from each other, even though you can see by looking at the consonant chart (on the inside front cover of your book) that the /l/ and /r/ phonemes are similar in terms of their place and manner of articulation. However, other languages—such as Japanese, Korean, and Hawaiian—do not have a phonemic distinction between [l] and [r] because in those languages the sounds are allophones of one phoneme. In Japanese, there is only one /r/ phoneme, though it is a bit different from the American English [r], and one of the allophones of /r/ sounds more like an [l] to English speakers. And Hawaiian has no /r/, so when English words are borrowed into Hawaiian, a closest-match phoneme substitutes. In Hawaiian, therefore, the English borrowing *Merry Christmas* is pronounced *Meli Kalikimaka* (Hawaiian also lacks the /s/ phoneme).

#### RPE 4.1

#### RPE 4.2

Another example of sounds that are phonemes in English but not in another language is /z/ and /s/. These two sounds are distinct phonemes in English but allophones in some varieties of Spanish. And in most dialects of English, /n/ and /ŋ/ are separate phonemes (as in *run* and *rung*), but in Italian and Spanish they are allophones. Many sound pairs are phonemes in other

languages but not in English. Consider Lushootseed, for example, a Salish language spoken in the state of Washington. This language has a voiceless palatal affricate /č/ like English, but it also has an ejective version of that sound (a voiceless ejective palatal affricate) that is a distinct phoneme, so there are words that differ only in having /č/ instead of /č'/, and the two words mean different things: /čəl/ 'we' and /č'əl/ 'tear', for example.

Perhaps the following analogy will be useful for thinking about phonemes and allophones. Imagine that you are a naturalist working in Alaska. You go twice a year to catalog the animals there. In the summer, you find a large number of short-haired weasels, among other animals, and in the winter you find a large number of ermines. However, you never find ermines when you find short-tailed weasels, and you never find short-tailed weasels when you find ermines. It soon becomes clear: short-tailed weasels and ermines are the same animal; the ermine is a short-tailed weasel with a winter-white coat, or a short-tailed weasel is an ermine with a summer-brown coat. One animal, whose scientific name is *Mustela erminea*, shows up in different ways according to its environment. A phoneme is likewise one "animal" that shows up in different

### Did You Know...?



#### Babies Are Better at Language

Until babies are about 6 months old, they perceive all allophonic contrasts of the world's languages (Werker and Desjardins 1995). Although an English-speaking adult, for example, has a difficult time hearing differences that are not English phonemes, any baby can do it. So Japanese babies perceive the contrast between [r] and [l], even though this phonetic contrast does not exist in Japanese. Babies who will grow up to be English speakers can perceive the distinction between [t] and the retroflex [ʈ], a difference that exists in Hindi, among other languages, but not in English. Another example comes from the Salish language Nthlakampx, spoken in British Columbia, which makes a distinction between the glottalized velar and uvular stops [k'] and [q']. Experiments show that English-speaking babies perceive the contrast, but English-speaking adults cannot. After they are 10 to 12 months old, however, babies perceive only the phonemic contrasts of the language or languages spoken around them.

*For more information*

Jusczyk, P. 1993. From general to language-specific capacities: The WRAPSA model of how speech perception develops. *Journal of Phonetics* [Special issue on phonetic development], 21(1–2). 3–28.

Werker, J. & R. Desjardins. 1995. Listening to speech in the first year of life: Experiential influences on phoneme perception. *Current Directions in Psychological Sciences*, 4(3). 76–81.



ways according to its “environment”—the sounds with which it occurs and its position in relation to them.

Because phonemes are important units of linguistic structure, linguists must have a general method for identifying them in all languages, but the task of determining the phonemes of a language and the allophones assigned to them is not always straightforward. Imagine that you are listening to a language you have never heard before. You could record the sounds in narrow phonetic detail, but you would have no idea which sounds were the phonemes of that language and which were allophones of other phonemes. By a method of comparison and contrast, we can isolate the phonemes of language.

**Note:** We have been using slashes to indicate the phonemes in a particular language. Brackets are used to indicate words that are transcribed with more phonetic detail, the allophones. In transcription, you will use only phonemes (/t/ rather than its many allophonic variants, for example)—those are the distinct sounds that make a difference in the meaning of a word in English.

Neighboring sounds affect each other. Some phonemes change to make the sound combinations easier to pronounce, and some change to make them easier to perceive. These same processes—or unconscious “rules”—are at work in all languages and are at the heart of language variation, language change, and language acquisition. We illustrate some of the most common types of phonological rules here.

#### RPE 4.3

#### RPE 4.4

## Language Alive!

### Long-Lost English Allophones

Old English /h/ had several allophones that Present-Day English does not: in Old English, /h/ was [h] word-initially before vowels (except front vowels) and before the consonants /l, r, n, w/; but /h/ was the palatal fricative [ç] after front vowels and the velar fricative [x] elsewhere. Present-Day English has lost these allophonic variations of /h/. There were also more allophonic variations of /g/. Now we simply have /g/, but in Old English the voiced velar fricative, represented by the symbol [ɣ], occurred after a vowel or a liquid, while the voiced velar stop [g] occurred elsewhere. So the word *dagas* ‘days’ was pronounced [daɣas] because the /g/ followed a vowel. Also, as mentioned in Chapter 3, some sounds that were allophones only in older forms of English have now become distinct phonemes. For example, /ŋ/ was an allophone of /n/ that occurred before the velars /k/ or /g/. In Present-Day English, it is a distinct phoneme, as in *sing* /sɪŋ/.

## Assimilation Rules

### assimilation

process of making  
one sound more  
like a neighboring  
one with respect to  
some feature

One of the most common phonological rules across all languages is **assimilation**, the process of making one sound more like a neighboring one with respect to some feature. Here are some examples of assimilation.

### Vowel Nasalization

When most English speakers say the word *man*, we begin to lower the velum so that air can pass through the nasal cavity for the /n/ while we are still saying the vowel /æ/. This opening of the velum has the effect of nasalizing the vowel, marked by ~.

pan /pæn/ as [pæ̃n]

This rule of nasalization in English holds for all vowels in that position: A vowel becomes nasalized when it precedes a nasal consonant (n, ŋ, or m).

Speakers of some dialects, especially those in the Northeastern United States and parts of the Midwest, have more nasalization (allow more air to pass through the nasal cavity and also to pass through earlier in the production of the vowel) than other speakers do.

### Alveolar Nasal Assimilation

Many adults, especially in casual speech, and most children assimilate the place of articulation of the nasal to the following labial consonant in the word *sandwich*:

sandwich /sænwič/ → /sæmwič/

3 in a row  
misch → Ø

The alveolar nasal /n/ assimilates to the bilabial /w/ by changing the alveolar to a bilabial /m/. (The /d/ of the spelling is not present for most speakers, though it can occur in careful pronunciation.)

### Nasal Assimilation

Another example of the assimilation of /n/ to what follows can be seen when the /n/ of a word like *can* (among others) can assimilate to the place of articulation of the following consonant. Compare the following:

I can be ready in five minutes.

can be /kæn bi/ → /kæm bi/

I can go with you.

can go /kæn go/ → /kæŋ go/

I can see the palace from here.

can see /kæn si/ → /kæn si/

Sometimes we are so influenced by the spelling that we don't realize that such assimilation is going on, though it is for most English speakers in casual speech.

## Palatalization

### palatalization

process that results from an interaction between either front vowels or a /y/ glide and a neighboring alveolar consonant, resulting in a fricative or affricate palatal consonant

**Palatalization** is a common process that results from an interaction between either front vowels or a /y/ glide and a neighboring alveolar consonant, resulting in a fricative or affricate palatal consonant. This phonological shift varies across dialects as well as across careful versus casual speech.

alveolar stop + high front vowel or glide → palatalized fricative or affricate

t + yu → č     *mature, nature*

/mətyur/ → /məčur/

d + y → ĵ     *could you, would you, did you*

/kud yu/ → /kuĵu/

Similarly, alveolar stops that are followed by /r/ become palatalized:

d + r → ĵr     *drink*

t + r → čr     *truck*

These next examples involve an across-the-board pronunciation shift; that is, because most speakers make these assimilations all the time, we can say that the language has changed. Native English speakers don't say /netɪən/ or /ɡresɪəs/; rather they now say /neʃən/ and /ɡreʃəs/, where the alveolars have become palatalized.

t + i → š     as in *nation*  
s + i → š     as in *gracious*

hwæt!

Palatalization is reflected in informal spellings such as *wudja* (for 'would you') and *didja* (for 'did you'). Do you think these are likely to become standard spellings?

*Direct*

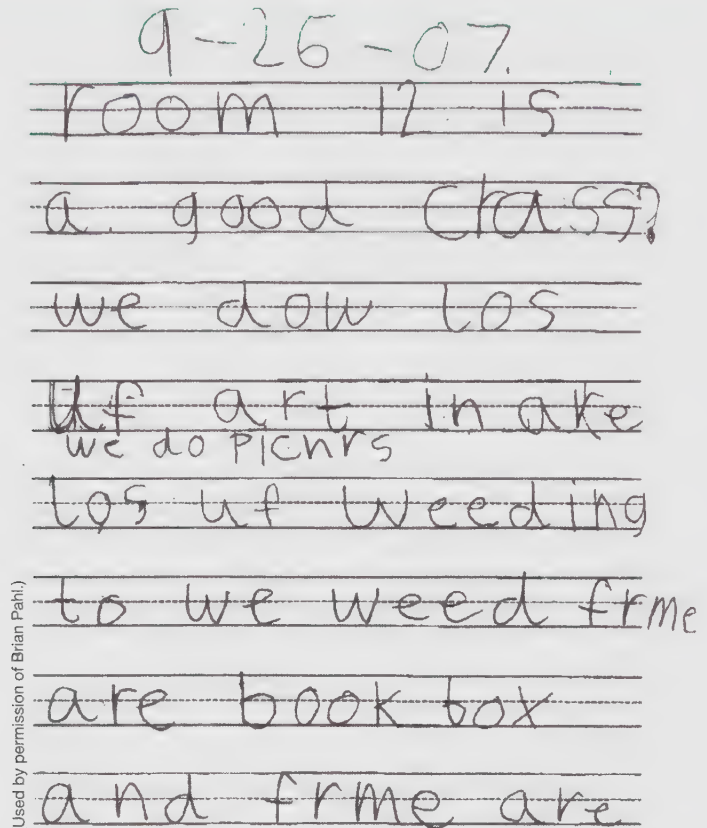
### Did You Know...?



#### Invented Spelling

Young children often misspell words because they spell them "as they sound." (See Figure 4.1.) That is, they use the symbol that most commonly represents a sound, and they try to write down in letters what they hear. So they might spell *called* as *kald*, *pushed* as *pusht*, *trip* or *truck* as *chrip* and *chruck*, and *drop* as *jrop*. They are actually making very good matches between spelling symbols and sound. Such "invented spelling" is often allowed in early grades now (kindergarten and first grade) to allow children to focus on getting their thoughts down on paper and on beginning to make the connections between sound and symbol (what's known as *phonics*). Then, later, the student and the teacher can focus on spelling correctly.

**Figure 4.1** Children spell things as they hear them. This young student has written 'Room 12 is a good class. We do lots of art. In art we do pictures. Lots of reading too. We read from our book box and from our. . . .' (Used by permission of Brian Pahl.)



## Voicing Assimilation

Voicing assimilation occurs quite frequently in English. The following example shows how voiced /v/ of the word *have* assimilates to the voiceless /t/ following it in the expression *have to*:

/hæv tu/ → /hæf tu/

The same assimilation happens for the /d/ of *used to*, which becomes /t/, and the /z/ of *has* in *has to*, which becomes /s/.

In children's acquisition of language, assimilation is a very common process. One example of this process is assimilation of voiced sounds, so a word like *paper* with two voiceless /p/s may

## hwæt!

Some recent product names use <z>, including Bratz, Myntz, Squirtz, Catz, and Dogz. Of these examples, however, only Dogz mimics pronunciation, the others being nearly impossible to pronounce with a /z/ rather than an /s/ since assimilation is hard at work!



assimilate to the voicing of the neighboring vowels, resulting in a pronunciation like the following:

paper /bebə/

The child changes the voiceless /p/ to voiced sounds to assimilate to the voiced vowels, resulting in voicing across the board. This also happens in adult variations. So for some speakers (including adults), an /s/ between two vowels becomes voiced, resulting in /z/:

casserole /kæsərol/ → /kæzərol/  
Leslie /lesli/ → /lezli/

In fact, much dialectal variation is a result of assimilation. Another example of this assimilation is that some speakers pronounce the word *thanks* with a voiced /ð/ rather than the voiceless /θ/:

thanks /θæŋks/ → /ðæŋks/

And sometimes the /k/ and /s/ may assimilate with respect to voicing as well, resulting in /ðæŋgz/ or *Thanksgiving* /ðæŋgzɡɪvɪŋ/.

Voicing assimilation is at work in the production of the English regular plural ending -s. Consider the ways in which this most common plural ending varies phonologically according to the ending sound of the word it attaches to. Make each of the following words plural, and determine how you would transcribe each plural ending phonemically.

fig	fad	fly
top	fang	jig
tack	church	ball
fifth	judge	staff
dam	bib	kiss
buzz	car	bat
dish	can	garage

#### RPE 4.5

**allomorph**  
predictable variant  
of a morpheme

#### RPE 4.6

**sibilants** the natural class of “hissing” or “hushing” sounds in a language, which includes alveolar and palatal fricatives and affricates

You should have three different endings: /s/, /z/, and /əz/. (The vowel of this final ending could be slightly different, sometimes closer to /ɪ/, giving /ɪz/. What’s important is that a vowel must be inserted before the plural ending in some of the words.) It is the final sound in each word that determines which form of the plural morpheme, or **allomorph**, attaches. Determine which natural class of sound leads to each ending.

You should have come up with the following generalizations:

/s/ follows /p, t, k, f, θ/ = voiceless sounds  
/z/ follows /b, m, d, n, g, ŋ, l, r, ay/ = voiced sounds  
/əz/ follows /s, z, ʃ, č, ž, ĵ/ = sibilants

**Sibilants** is the name for the natural class of sounds that are “hissing” or “hushing” sounds. Sibilants group together in many languages. Table 4.1

Table 4.1

Consonant Phonemes of English with Sibilants

	Bilabial	Labiodental	Interdental	Alveolar	Palatal	Velar	Glottal
Stop	p b			t d		k g	
Fricative		f v	θ ð	s z	ʃ ʒ		
Affricate					č ǰ		
Nasal	m			n		ŋ	
Glide	ʍ w				y		h
Liquid				l r			

voiceless	voiced
sibilants	

shows our consonant chart with the natural class of sibilants (alveolar and palatal fricatives and affricates) indicated.

Even when we encounter new words or made-up words, we know which plural ending to use, as you can see if you pluralize the following nonsense words.

tark      bab      blutch  
blick      carg      clush

In the “Review, Practice, and Explore” section, you will investigate some variations on this rule of plural formation from child language acquisition.

#### RPE 4.7

## Dissimilation Rules

### dissimilation

process causing two neighboring sounds to become less alike with respect to some feature

Rules of **dissimilation** cause two neighboring sounds to become less alike with respect to some feature.

### Dissimilation of Liquids and Nasal Sounds

Historically, Latin *turtur* was borrowed into English, but the second /r/ changed to /l/. Latin *purpura* and Middle English *purple* became *purple* in Present-Day English.

turtur → turtle  
purpre → purple

Consider a similar example of dissimilation of liquid consonants that took place when the suffix *-al* attached to some Latin nouns to make adjectives.

The regular suffixation process gives us pairs like the following: *orbit/orbital*, *person/personal*, *culture/cultural*, *electric/electrical*. However, when an /l/ precedes the ending anywhere in the root, the ending is changed from -al to -ar as a result of dissimilation: *single/singular*, *module/modular*, *luna/lunar*.

Latin *marmor* became Present-Day English *marble* via two dissimilations: the second *r* changed to *l*, then the second *m* changed to *b*, to dissimilate the two bilabial nasals, /m/.

marmor → marmle → marble

Another example of sonorant dissimilation comes from the Appalachian dialect, in which the word *chimney* is pronounced /čimli/ rather than /čimni/. The /n/ becomes an /l/, remaining an alveolar but losing its nasality to dissimilate the /m/ and /n/ with respect to nasality.

Dissimilation of Fricative Sounds

Many speakers avoid neighboring fricatives by changing one to a different place of articulation, so a word like *months* /mʌnθs/ becomes /mʌnts/, in which the fricative /θ/ becomes /t/. This happens frequently in casual speech and can disappear in more careful speech. (Also, the /t/ here may be assimilating to the same alveolar place of articulation as the preceding /n/, so perhaps both assimilation and dissimilation are at work.)

RPE 4.8

Insertion Rules

**insertion** process causing a segment not present at the phonemic level to be added to the phonetic form of a word

Rules of **insertion** (also called *epenthesis*) cause a segment not present at the phonemic level to be added to the phonetic form of a word.

Insertion of Vowels

From Old English to Middle English, vowels were inserted between consonants in certain positions. These insertions are indicated in these Middle English spellings.

Old English		Middle English	Present-Day English
purh <sup>1</sup>	→	thorow	'thorough'
setl	→	setel	'seat'
æfre	→	ever	'dream'

1. The þ is a symbol used in Old English to represent the interdental fricatives /θ/ and /ð/.

## RPE 4.9

In Present-Day English, many variations across dialects involve insertion (or not) of vowels. Do you have a vowel in *realtor* between the /l/ and the /t/? Often, too, a vowel is inserted between the consonants of a consonant cluster, as when a /ə/ occurs between /p/ and /l/ in words like *paraplegic* or *quadriplegic*. Other contemporary examples of vowel insertion are found in the “Review, Practice, and Explore” section.

## Insertion of Consonants

Another example of an insertion that happened during the Middle English period is the insertion of /d/ in what now appears as *thunder*. (The <þ> is an Old English symbol representing /ð/ in this word.)

Old English *þunor* → Present-Day English *thunder*  
(compare German *Donner* ‘thunder’)

The alveolar stop with the same place of articulation as the nasal /n/ (alveolar) was inserted in Old English speakers’ speech to ease transition to the vowel. This /d/ was also inserted into the spelling and eventually became the standard spelling. The *d* in Present-Day English *thunder* is no longer considered an insertion for current speakers, as it is present phonemically.

## Insertion of Voiceless Stop

A common insertion takes place between a nasal and a voiceless fricative when a voiceless stop with the same place of articulation as the nasal is inserted.

hamster	/hæmstr̥/	→	/hæmpstr̥/
something	/sʌmθɪŋ/ or /sʌmθɪn/	→	/sʌmpθɪŋ/ or /sʌmpθɪn/ <sup>2</sup>
strength	/streŋθ/	→	/streŋkθ/

This insertion rule also led to the two common spellings of the surname *Thomson/Thompson*. Both derive from the English and Scottish first name *Thomas*. The *p* was inserted in the spelling by some because it sounds as if it is there. (And remember, it’s *Chomsky*, not *Chompsky*!) The word *empty* underwent this insertion process; in Old English the word was *æmtig*, with no /p/ between the /m/ and the /t/.

## Insertion of /y/

In some dialects of English—most British dialects and some southeastern American dialects—a /y/ is inserted after initial alveolar consonants and preceding high vowels, so words like *news*, *Tuesday*, and *duke* are pronounced /nyuz/, /tyuzde/, and /dyuk/. This insertion—which used to be the norm

2. Note the further deletion and assimilation that can occur in this word’s pronunciation: /sʌmpm̩/



in American English (so maybe it's not insertion but is better described as deletion)—appears to be gradually on its way out of the language, with the /y/ disappearing following certain kinds of consonants, as in *news*, but not yet lost in others, like *few*, /fyu/, and *puny*, /pyuni/.

## Deletion Rules

**deletion** process causing a segment present at the phonemic level to be deleted at the phonetic level of a word

Rules of **deletion** cause a segment present at the phonemic level to be deleted at the phonetic level of a word.

### Deletion of /r/ after Vowels

In many English dialects, /r/ is deleted when it follows a vowel. So words like *car* and *yard* are pronounced like /ka/ and /jad/. The “dropping of /r/s” in words like *car*, *park*, *hard*, and *court* is usually perceived as somewhat nonstandard in American English. It occurs most frequently in some dialects of New England and some dialects of the Deep South. However, in Britain, the dropping of /r/s in the very same words is considered characteristic of the standard dialect and is viewed favorably not only by British speakers but also by most American English speakers. This contrast in the attitude toward the same linguistic feature illustrates that standard and nonstandard features of dialects are socially, not linguistically, determined.

RPE 4.10

RPE 4.11

## Language Alive!

### Where the Heck Is <h>?

Why are words spelled with <h>s that we never say or hear? Many words spelled with <h> have no /h/ in the pronunciation for any English speaker: *hour*, *honor*, *honest*. These examples, then, are not examples of phonological deletion, though they would have been at some earlier point in the history of English. Although the letter <h> comes from the Roman alphabet, the /h/ sound was eventually lost in Latin and in the Romance languages that came from Latin. However, it is retained in the spelling of some words that English has borrowed from those languages, primarily French. So *honor*, *honest*, *hour*, and *heir*, borrowed from French, do not have the initial /h/, just as French does not. However, in Old English, <h> at the beginning of words and before vowels was pronounced /h/. In Middle English, the /h/ in those positions seems to have weakened and was often not pronounced, but in Present-Day English, perhaps due to the influence of spelling, the /h/ is usually pronounced not only in such Anglo-Saxon words as *happy* and *hot*, but in some French borrowings as well: *hostel*, *hotel*, *haste*. In some other English words borrowed from the French, there is dialectal variation such that in certain dialects the /h/ is pronounced in the words *herb*, *human*, *humor*, and *humble*, and in others it is not.

## Deletion of Fricative Next to Fricative

The same process that leads to dissimilation can lead instead to deletion of one of the like sounds. For example, in words like *fifths* /fɪfθs/ and *sixths* /sɪksθs/, in which three fricatives occur in a row, one or two of them frequently are deleted.

/fɪfθs/ → /fɪfs/ or /fɪθs/ or even /fɪs/

### Did You Know...?



#### Where Do You Get Tenashoes?

Tennis shoes are not just shoes for tennis. The word is likely stored as a single word in the mental lexicon of most speakers (especially those who do not use the word *sneakers*). When *tennis* precedes another word like *shorts*, the /s/ is not likely to delete because that is not a single lexical entry, and the word *tennis* needs to be made clear to the hearer in order to maintain communicative efficiency: *tennis shorts* remains /tɛnɪs ʃɔrts/ and does not become /tɛnə ʃɔrts/. The fricative deletion in *tennis shoes* doesn't typically happen across word boundaries; for example, *fresh start* would be /frɛʃ start/, not /frɛ start/ or /frɛʃ tart/. This fact provides evidence that *tennis shoes* is a single compound word. Also compare the compound word *tennis shoes*, /tɛnɪs ʃuːz/ → /tɛnɪ ʃuːz/, to a phrase such as *tennis balls*, in which a stop /b/ follows the /s/, /tɛnɪs balz/. There is no /s/ deletion on *tennis* in *tennis balls* because the /b/ does not use the same manner of articulation as /s/. (Compounds are discussed more in Chapter 5, 'Morphology'.) There is also semantic evidence for *tennis shoes*'s compound status; it is not just the sum of the meanings of its parts.

## Deletion of Like Sounds or Syllables

Repeated consonants or entire syllables containing similar sounds are often deleted in casual speech:

probably /prabəbli/ → /prabli/  
mirror /mɪrər/ → /mɪr/

## Simplification of Consonant Clusters

There was historical deletion of /k/ and /g/ before /n/, as in *knight*, *knob*, *gnat*, as well as other consonant clusters. Realize that these are not currently considered deletions, however; though the letters appear in the spelling, they are not there phonologically for any modern-day speaker of English. Old and Middle English speakers would have pronounced these consonants before /n/, but this

pronunciation had gradually dropped out by the late seventeenth century, during the Early Modern English period. As this simplification of a consonant cluster took place, there was a time when some speakers had the cluster /kn/ and others did not.

Compare the Old English and Early Modern English pronunciations of the following words.

Old English		Middle English		Early Modern English and Present-Day English
cnawan /kn/	→	knowe(n)	→	know /no/
gnagan /gn/	→	gnawe(n)	→	gnaw /na/

### Simplification of Syllable-Final Consonant Clusters

Simplification of syllable-final consonant clusters is a common phonological process, though it does happen more in some dialects than others and much more frequently in fast speech.

fast pitch	/fæst piç/	→	/fæs piç/
friend	/frɛnd/	→	/frɛn/
M&M	/ɛmændɛm/	→	/ɛmənɛm/
softball	/saftbal/	→	/safbal/
grandma	/grændma/	→	/grænma/ or /græma/ (with deletion of the first nasal)

## Fronting Rules

**fronting** process causing a segment produced in the back of the mouth to change to a segment produced at the front of the mouth

Rules of **fronting** cause a segment produced in the back of the mouth to change to a segment produced at the front of the mouth. There are more front consonants than back consonants across the world's languages, and front consonants are acquired before back consonants in most children's language.

### Fronting of Velar Nasal to Alveolar Nasal

In many speakers' casual speech, words ending in *-ing* are pronounced with /in/ rather than /ɪŋ/. The velar nasal has fronted to become an alveolar nasal.

running	/rʌnɪŋ/	→	/rʌnɪn/
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### Fronting in Child Language

Many children front most velar sounds during the first few years of language acquisition.

goat	/got/	→	/dot/
OK	/oke/	→	/ote/

## Fronting of /x/

A historical example of velar fronting is the velar fricative /x/ becoming a labiodental fricative /f/ in words such as *tough* and *enough*. The letters *h* and later *gh* were used to represent the velar fricative /x/ in Old English. In some modern English words that formerly had /x/, the consonant fronted to /f/, but in others it disappeared completely (*though*, *bough*, *night*, etc.).

OE /x/      →      /f/

## Exchange Rules

Exchange rules reorder sounds or syllables. This exchange process is also known as *metathesis*.

### Exchanging /s/ and a Consonant

The two consonants /s/ and /k/ spend a lot of time switching around in English. The same process that leads to the much-stigmatized metathesized pronunciation of *ask* also occurs in the less-stigmatized pronunciation of *asterisk*.

ask	/æsk/	→	/æks/
asterisk	/æstərɪsk/	→	/æstərɪks/

Historical switching of /s/ and /k/ also occurred, leading to both the modern English words *tax* and *task*:

Latin <i>taxa</i>	/taksa/	→	/tæsk/	‘task’
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Historical switching of /s/ and /p/ also took place:

<i>wasp</i>	OE <i>wæps</i>	→	PDE <i>wasp</i>
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## Language Alive!

### What's Wrong with Aks?

As many of you are probably aware, the pronunciation *aks* for *ask* is quite stigmatized in U.S. English. This is for social reasons, however, not for linguistic ones. The form *aks* actually has a long and rich history. The Old English word from which we get *ask* had two forms that coexisted, *acsian* and *ascian*. The pronunciation and spelling of this word as “aks” was quite standard up to the nineteenth century and is still common in dialects both in the United States and in Britain.



## Exchanging /r/ and a Vowel

Another common kind of metathesis occurs with /r/ and a neighboring vowel. This can be seen in current dialect variation, in historical examples, and in child language:

Old English		Present-Day English
brid	→	bird
drit	→	dirt
thrida	→	third

Modern English dialect variations include metathesized versions of *children* as /čildərn/ and *pretty* as /pərti/, and the more common /intərdus/ for /intrədus/ ‘introduce’.

## Exchanging Syllable Onsets

The onsets (beginning consonants or consonant clusters) of syllables commonly metathesize. This manipulation of the first sounds of syllables is especially common in child language, as in these common examples.

animal	/æniməl/	→	/æminəl/
cinnamon	/sinəmən/	→	/simənən/

Such metatheses are also at work in adult language. The pronunciation of *nuclear* as /nukyələr/ involves metathesis, perhaps, but there’s more than meets the eye (the ear?) with this word.

RPE 4.12

## Multiple-Rule Processes

Sometimes more than one phonological process is employed in a phonological variation or change. Consider the following example, which involves both deletion and assimilation.

pumpkin	/pʌmpkin/	→	/pʌŋkin/
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The second /p/ deletes (as a result of dissimilation) and then the /m/ assimilates to the same place of articulation (velar) as the following /k/.

Another example is the word *something*:

something	/sʌmθɪŋ/ or /sʌmθɪn/	→	/sʌmpθɪŋ/ or /sʌmpθɪn/
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When the word is pronounced in casual speech as /sʌmpm̩ /, there is not only insertion of /p/ (discussed previously) but also assimilation (of the /n/ to /m/) and deletion (of /θ/).

# Language Alive!

## Going Nucular

Geoff Nunberg

Former President George W. Bush took a lot of ribbing (even from his wife!) for pronouncing the word *nuclear* as “nucular.” But he was not the first president to do so. That one has been getting on people’s nerves since Eisenhower made the mispronunciation famous in the 1950s. In Woody Allen’s 1989 film *Crimes and Misdemeanors*, Mia Farrow’s character says she could never fall for any man who says “nucular.” . . . On the face of things, “nucular” is a typo *par excellence*. People sometimes talk about President Bush “stumbling” over the word, as if this were the same kind of articulatory problem that turns *February* into “febyooary.” But *nuclear* isn’t a hard word to pronounce the way *February* is—try saying each of them three times fast. Phonetically, in fact, *nuclear* is pretty much the same as *likelier*, and nobody ever gets that one wrong. (“The first outcome was likular than the second”?) That “nucular” pronunciation is really what linguists call a folk etymology, where the unfamiliar word *nuclear* is treated as if it had the same suffix as words like *molecular* and *particular*. It’s the same sort of process that turns *lackadaisical* into “laxadaisical” and *chaise longue* into *chaise lounge*.

For more information

From Nunberg, G. 2004. Going nucular. *Fresh air*. National Public Radio. October 2. Published in *Going nucular*. 2004. New York: Public Affairs.

It’s not always clear exactly why a phonological process has taken place. Sometimes the rules aren’t easily motivated by a process. For example, in some dialects of English in the United States (in the South, parts of the Midwest, and more recently, parts of the West), the vowel /ɛ/ has become /ɪ/ when it occurs before a nasal consonant, /m/, /n/, or /ŋ/.

wren	/rɪn/
pen	/pɪn/
gem	/ʃɪm/
temper	/tɪmpər/
length	/lɪŋθ/
strength	/strɪŋθ/

Though this a rule-governed process—we can see that the vowel changes only when a nasal follows—it’s not entirely clear what it is about the nasal that leads to the vowel change.

In this section, you have seen how phonological language variation and language change are motivated by the same kinds of natural phonological processes. Children’s language acquisition (and the variation that is a part

## hwæt!

Perhaps someone should have thought a bit more about the phonology of some arguably bad product names: Bloxom (a weblog application), Fauxto (an editing tool, which has recently changed its name to Splashup), and Cuil (a search engine). They all involve combinations of letters that English readers just aren't sure how to pronounce.

**ease of articulation**  
making something  
easier to say

of it) also is motivated by assimilation, dissimilation, deletion, insertion, metathesis, and fronting. You should be aware that the variety of rules introduced here is not exhaustive and that the set of rules can vary across dialects and even among individuals—each person has a slightly different set of phonological rules and processes in his or her speech.

You may have noticed in reading through and thinking about the examples of phonological processes discussed in this section that some are much more noticeable than others. Some you may have been aware of—and bothered by; others you didn't realize were occurring. Sometimes we never even hear the 'alternative' pronunciation as a contrast, and sometimes we simply don't notice the phonological changes because the variations are subtle and are assimilated by our ear and brain. Vowel variations are much more common and are fairly happily tolerated, while consonant variations are typically more stigmatized. The stigmatization is stronger for consonant variation primarily because the consonant sounds correlate more directly with spelling than do vowel sounds.

Though the motivation behind many of these phonological processes is **ease of articulation**—that is, making something easier to say—that motivation is always competing with other factors. If ease of articulation were the sole motivation for language change, then presumably we would all be moving toward the same kinds of changes, not only in English but in other languages. However, we will see in the “Review, Practice, and Explore” section how certain variation, motivated by ease of articulation (such as assimilation), can vary, and we will discover other factors that can affect the change or lack of change. This is a topic we will continue to investigate throughout the book. Also, it is an ongoing area of research among phoneticians and phonologists to discover the motivation for phonological processes in general.

## Suprasegmentals

**suprasegmentals**  
phonological  
phenomena that are  
larger than a single  
sound; includes  
syllables, stress, and  
intonation

In this section, we will explore some aspects of phonology bigger than the single sound, the “segment”; these are called **suprasegmentals**, and they include syllables, stress, and intonation.

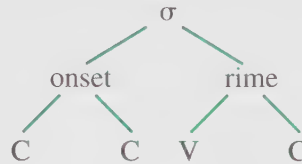
### Syllables

**syllable** basic unit  
of speech generally  
containing only one  
vowel sound (*nucleus*)  
and also possibly  
an *onset* and a *coda*  
(called the *rime*)

It is actually difficult to provide a neat definition of a **syllable**, though we all have awareness of syllables naturally and unconsciously. Very young children are able to tap out syllables; many phonological processes refer to the syllables of words; and children (and adults) manipulate syllables quite skillfully in all sorts of ways.

## The Structure of the Syllable

Languages have varying syllable structures. The group of consonants at the beginning of a syllable is called the **onset**, and the vowel and any consonants following it at the end of the syllable are called the **rime**. The symbol traditionally used by linguists for a syllable is the Greek letter sigma,  $\sigma$ .

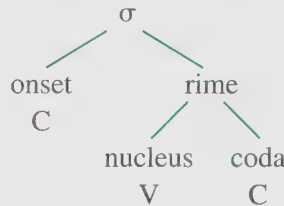


**onset** consonant(s) at the beginning of a syllable

**rime** vowel and any consonants following it at the end of the syllable

**nucleus** vowel that is the minimum unit of the rime

The rime can be further divided into a **nucleus**, a vowel that is the heart of the rime, and a **coda**, the consonant(s) at the end of the rime.



**coda** consonant(s) at the end of the rime

Vowels are almost always the nucleus of a syllable. However, if the syllable lacks a vowel, certain consonants are able to take over as the nucleus of the syllable; recall the discussion in Chapter 3 of the syllabic consonants, /r/, l, m, n /.

In English, an onset can consist of a cluster of consonants.

Certain groups of two phonemes can occur next to each other at the beginning of a syllable: /fl/, /sp/, and /tr/, among others. Consider which three sounds can occur as the onset of a syllable in English: /spl/, /spr/, /skr/, /str/, and the rare /skl/, as in *sclerosis*. You must remember to ignore spelling when considering cluster combinations and focus on only the sounds (so *thistle* and *psychology*, for example, do not contain word-initial consonant clusters, even though they are spelled with initial consonants).

hwæt!

The word *strengths* may have the most complex syllable structure of any English word: /strɛŋkθs/, with three consonants in the onset and four in the coda!

## Phonotactics

Note that all the consonant clusters just discussed must occur in a particular order and in a particular position within the syllable. So although /spl/ may occur at the beginning of a syllable, /pls/ cannot. And though /spl/ may occur as the onset of a syllable, it may not occur as the coda of a syllable.

Such restrictions are known as **phonotactics**; this is the branch of phonology that deals with natural and unconscious restrictions on the permissible combinations of phonemes in a particular language. English, for example, may have /ŋ/ at the end of a syllable as the coda but not as the onset:

sing    /sɪŋ/    \* /ŋɪs/    (\* indicates an impossible word)

**phonotactics** branch of phonology dealing with natural and unconscious restrictions on the permissible combinations of phonemes in a language



**graphotactic**  
related to the  
spelling and writing  
system

On the other hand, /kt/ is a possible coda, as in *kicked* /kɪkt/, but not a possible onset. We are quite aware of these restrictions as speakers of a language, as evidenced by our knowledge of the related **graphotactic** constraints (as these use letters, not sounds) of anagrams or jumbles, like those typically found in many newspapers and other word game collections. So it doesn't take most people long to unscramble the letters here to make a word:

irgn

We know that <ng> is not a possible combination at the beginning of the word or in the middle, so we quickly come up with *ring* or *grin*, rather than randomly trying the many possible combinations of the letters.

Even slips of the tongue reveal our knowledge of phonotactic constraints. Consider the following intended and actual utterance pair:

scratching Daddy's back	snatching graddy's back
/skræʃŋ dædɪz/	/snæʃŋ grædɪz/

In this example, the /kr/ of *scratching* and the /d/ of *Daddy* exchange. However, since /sd/ is not a possible combination in English, the alveolar stop /d/ becomes the alveolar nasal /n/, which is the only voiced alveolar allowed following /s/; thus /skr/ has become /sn/, and the velar /k/ that is now in initial position in the second word becomes the voiced velar /g/. So even when we “mess up,” we do not violate our language's phonotactic constraints.

The rime in English can consist of a vowel followed by a consonant, as in *bat* /bæt/, or a cluster of two consonants, as in *toast*, *lift*, and *kicked* /kɪkt/; three consonants, as in *wasps* /wɒps/; or even four, as in *prompts* /prɒmpts/ or *sixths* /sɪksθs/. Despite English allowing syllables with complex onsets and codas, speakers often tend to reduce those clusters; consider the /rst/ of the word *first* in a compound word like *first grade*, which typically is pronounced /fɜrs gred/ rather than /fɜrst gred/, and the cluster in *sixths* /sɪksθs/, which most speakers would reduce to /sɪks/ except in careful speech. In many dialects of English, including African American English and Navajo English, word-final consonant clusters are reduced, so words such as *desk*, *toast*, and *walked* are pronounced /des/, /tos/, and /wak/. This phenomenon is sensitive to morphological information, so if the cluster reduction would eliminate a grammatical marker, such as past-tense information, -ed, then it is less common. For example, the reduced form of the past tense *walked* would be /wak/, which would be the same form as the present tense *walk* /wak/, and thus such a reduction is less common.

## Children's Syllables

Children acquiring English and other languages prefer consonant–vowel (CV) syllables and alter many syllables to make them conform to that structure. So CVC syllables often reduce to CV syllables for young children; for example, *cat* /kæt/ might be pronounced as /kæ/, *play* /ple/ as /pe/. Another common syllable-structure process in child language acquisition

**reduplication**

doubling of a syllable; a common syllable structure in children's language

is deletion of unstressed syllables; for example, *banana* is pronounced as /nænə/, with the less-stressed /bə/ deleted. Similarly, *potato* might be /dedo/ or /dedə/ (with voicing assimilation occurring as well). Another very common syllable-structure process is the doubling of a syllable, known as **reduplication**. Typically, the initial CV syllable is reduplicated; for example, *water* is /wawa/.

Let's consider a certain child's rule of consonant-cluster reduction. Following are the pronunciations of some words containing consonant clusters by a child named Jack when he was between the ages of 2½ and 3½.

spoon	/pun/
stick	/tɪk/
stupid	/tupɪd/
skate	/ket/
Spencer	/pɛnsə <sup>w</sup> /
scared	/keəd/
scrape	/kwep/
slide	/slayd/
swipe	/swayp/
snail	/snel/
small	/smal/
play	/ple/
flag	/flæg/
three	/θri/
shrink	/ʃrɪŋk/
crowd	/krawd/
crab	/kræb/

First, consider which combinations of /s/ + consonant exist in most adult dialects. (Remember to think phonemically here, not orthographically.) So in adult English, the voiceless stops /p, t, k/ are allowed following /s/ syllable-initially, as in *stop*, *spot*, and *skate*. Also, sonorants may follow /s/, as in *slide*, *sway*, *snake*, and *smile*. This child, however, allows only a sonorant to be the second consonant in the initial consonant cluster. If an obstruent is the second consonant in the cluster, he deletes the /s/.

These examples illustrate that even when children alter their pronunciation of syllables, they are doing so in a rule-governed, patterned way, thereby illustrating their sophisticated command of the language even though it does not yet match an adult version of the language.

## Syllable Structure Variety

In Maori and other languages, an onset can have only a single consonant and a rime must be just a vowel, so the basic structure of the Maori syllable is simply CV. CV syllables are the most common type of syllable in the world's languages. Japanese also has only CV syllables (with the

exception of /n/ as a coda), so when a word is borrowed from another language into Japanese, speakers will make that word conform to the phonotactics, the syllable structure, of Japanese. Consider the following English borrowings, which have been adjusted to conform to the syllable structure of Japanese.

- (1) strike /strayk/ → su-to-ra-i-ku
- (2) merry Christmas /mɛ ri kris mæs/ → me-ri ku-ri-si-ma-su
- (3) strawberry ice cream /stra bɛ ri ays krim/ → su-to-ro-be-ri a-i-su-ku-ri-mo

## hwæt!

Visit <http://www.spoonerism-fun.com/belief.html> to find a bunch of spoonerisms that result in words after the exchanges have taken place; for example, *answer to my prayers* → *prancer to my heirs*, or *part of the cure* → *cart of the pure*.

However, consonant clusters in loanwords do not necessarily follow the borrowing language's cluster limits. The Ubykh language (an extinct language of Turkey) had a word *psta*, a loan from Adyghe (a North Caucasian language of Russia) that violates Ubykh's rule of allowing no more than two initial consonants in an onset; also, the English words *sphere* /sfɪr/ and *sphinx* /sfɪŋks/, which are borrowed from Greek, violate the constraint that two fricatives may not appear adjacently word-initially. Despite their existence in English now, they remain odd-sounding words for most English speakers.

The South Caucasian languages, also called the Kartvelian languages, are spoken primarily in Georgia, with smaller groups of speakers in Turkey, Iran, Azerbaijan, Russia, and other countries. These languages are among the most permissive in the world in terms of the size of consonant clusters they allow. Here is an example of four consecutive consonants from Georgian:

*brt'q'eli* 'flat'

and even six consonants:

*mts'vrtneli* 'trainer' (/ts'/ is a single phoneme in Georgian)

## Slips of the Tongue and Syllables

Slips of the tongue reveal that speakers have a keen unconscious awareness of the structure of the syllable and are able to manipulate its parts quite judiciously. One of the most common types of slip of the tongue is an **exchange error**, a simple example of metathesis as previously discussed, or what is also called a **spoonerism**, named for William Spooner, who apparently made many of these exchange errors. Some of the better-known errors attributed to Spooner include the following:

### exchange error (spoonerism)

common type of slip of the tongue involving the exchange of one part of a syllable for another in two different words

lighting a fire	→	fighting a liar
missed all my	→	hissed all my mystery
history lectures		lectures
dear old queen	→	queera old dean
blow your nose	→	know your blows

As the final example indicates, it is typically not just the first sounds of two words that are exchanged but the onsets, here /b/, not just /b/. Also, syllable nuclei may exchange, as in the following examples:

ad hoc → odd hack  
/æd hak/ → /ad hæk/

In this example, the onsets and codas remain in place, and only the nuclei are exchanged.

Another piece of evidence for our unconscious knowledge of syllables is the aspiration rule that we previously discussed for English: Voiceless oral stops are aspirated when they occur at the beginning of a word (the *pit/spit* contrast). Note that this aspiration applies to beginnings of stressed syllables, not just to the beginning of words, again providing evidence for our unconscious awareness of syllable structure and the ways in which phonological rules interact with them.

#### Aspiration

account [a-k<sup>h</sup>awnt]  
append [ə-p<sup>h</sup>end]

#### No Aspiration

backpack [bæk-pæk]  
napkin [næp-kɪn]

RPE 4.13

## Stress

**stress** relative emphasis given to the syllables of a word

**Stress** refers to the relative prominence or emphasis of certain syllables in a word. This prominence can be achieved in several ways, depending on the language; stress is usually produced by an increase in articulatory force, by an increase in the airflow, and sometimes by increased muscular tension in the articulators. The results of this are higher pitch, longer duration, and greater intensity in stressed syllables than in unstressed syllables.

Stress has several linguistic functions in languages. Some languages have predictable and fixed word stress; for example, in Hungarian and Finnish, stress is always on the first syllable; in Quechua, Swahili, and Polish, stress is always on the next-to-last syllable. In these languages, such predictable stress patterns would serve as a signal of word boundaries, presumably aiding in language acquisition. In other languages, such as English, the position of stress is relatively free and may also be contrastive; that is, the changing position of stress may result in meaning and category differences.

#### Nouns

récord      compared to  
ímpact      compared to

#### Verbs

recórd  
impáct

(In these examples, changing the stress patterns also changes the quality of the vowels, so the words are not *homophones*; they are not pronounced identically.) Also, degrees of stress may be distinguished, so one can determine primary, secondary, and even tertiary stress.

rùdíméntary (˘ indicates secondary stress, and ˙ indicates primary stress)



English, Russian, and Arabic, among others, are called *stress-timed languages*, which means that the stressed syllables occur at a fairly constant rate, and the unstressed syllables are shorter. Other languages, such as Spanish, Telugu, and Yoruba, are *syllable-timed languages*, which means that syllables are produced at a fairly constant rate regardless of stress.

Syllable stress in English is less predictable, though it used to be quite regular; stress in Old English was fixed, with primary stress on the first syllable, but gradually shifted away from the first syllable due primarily to the influence of French.

Chomsky and Halle (1968) describe many of the rules of Present-Day English stress (ending up with forty-three rules of word-level stress for English!), discovering a complexity of patterns and rules beyond what we can tackle here. Compare the effects of Latinate and Germanic affixation.

Germanic affixes don't affect stress placement:

éarth      éárthly      unéarthly      unéarthliness

But Latinate suffixes do affect stress placement:

témpest      tempéstuous      tempestuócity  
grámmar      grammátical      grammaticálicity

Stress patterns vary across dialects of English as well; for example,

*ínsurance* with stress on the initial syllable in Southern American English compared to *insúrance* with stress on the second syllable in most other dialects

*cárburetor* with stress on the initial syllable in American English compared to *carburéttor* (spelled with two <t>s) with stress on the third syllable in British English

Poetry in English uses stress to establish the *meter* of the poem. Iambic pentameter, a common poetic pattern in English, is a *weak-strong*, or unstressed-stressed, pattern that is repeated five times in a line of verse. Other patterns, such as the following *dactyls* (a stressed syllable followed by two unstressed syllables), are also used in children's language play and nursery rhymes, as in the following example:

W S W W S W W S W W S

The cock's in the woodpile a-blowing his horn.

The bull's in the barn a-threshing of corn.

The maids in the meadows are making of hay.

The ducks in the river are swimming away.

RPE 4.14

RPE 4.15

## Intonation

In the previous chapter on phonetics, tone—variation in pitch—was discussed. Some languages can vary the pitch of a syllable, and this variation can result in meaning differences; Mandarin and Nupe examples were given. Varying the pitch

## Tone Languages and Perfect Pitch

**P**sychochemist Diana Deutsch defines *perfect pitch*, also called *absolute pitch*, as the ability to name or produce a musical note of particular pitch without any kind of prompt, such as a reference note. People with perfect pitch are very rare in the United States and Europe, a fact that piqued Deutsch's interest—why would this be? Her research suggests that the ability to acquire absolute pitch is universal at birth and that it can be accomplished if children are encouraged to develop perfect pitch during the critical period of language acquisition. And how do you develop perfect pitch during the critical period of language acquisition? By acquiring a tone language.

Deutsch began to study the relationship between perfect pitch and language acquisition in a 1999 study that tested native speakers of two tone languages, Mandarin and Vietnamese. The researchers found that speakers of Mandarin and Vietnamese were extremely precise in recognizing absolute pitch, suggesting that speakers of tone languages naturally acquire this ability early on, during the critical period. So then the question arose, Do more speakers of tone languages have absolute pitch than speakers of non-tone languages such as English? And if so, what does this tell us about the language you speak and your ear for music?

Deutsch and her research team tested the prevalence of absolute

pitch in 88 students (ages 17 to 34) at the Central Conservatory of Music (CCOM) in Beijing, China. All of the students spoke Mandarin. The researchers also tested a group of 115 students (ages 17 to 23) at the Eastman School of Music (ESM) in Rochester, New York. These students spoke non-tone languages.

The test consisted of thirty-six notes spanning the three-octave range beginning on the C below middle C, a span designed to test absolute pitch (rather than relative pitch based on reference notes). The chart below shows the results.

In both groups, students who had started musical training early had a better chance of acquiring perfect pitch. But overall, the prevalence of absolute pitch was much higher among the CCOM students than the ESM students. (Gender had no effect on the results.)

The striking difference between the CCOM and ESM groups, Deutsch and her colleagues claim, supports the hypothesis that infants can acquire absolute pitch as a

feature of speech and that this feature can carry over to music. The earlier the child is exposed to music, the better, supporting the idea that there is a critical period for this carryover of perfect pitch from language to music. Children who speak non-tone languages are at a disadvantage for acquiring absolute pitch, even if they begin music studies very early, perhaps because there is no option for carryover from language to music.

#### For more information

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National Public Radio. 2006. Behaves so strangely. *Radio Lab*. Show 202, April 21. <http://www.wnyc.org/shows/radiolab/episodes/2006/04/21>. (17 October, 2008.)

Perfect Pitch

Age of first musical training	Chinese students	American students
(yr)	(%)	(%)
4 to 5	60	14
6 to 7	55	6
8 to 9	42	0

**intonation** variation in pitch across an utterance

across a longer stretch of speech is known as **intonation**. Many languages, including English, use such pitch variations to convey surprise, irony, and questioning. American English typically has rising intonation across the utterance for what are called *yes–no* questions (“*She bought a new car?*”) and falling intonation for information-seeking questions (also called *wh-* questions) (“*What does she want to buy?*”), although there is much variation of these patterns in both American and British dialects.

Stress and intonation can interact at the sentence level; word-level stress patterns and pitch can be modified to indicate which part of the sentence is in focus or which word should receive special emphasis. In English, new and important information is typically placed at the end of a clause; therefore, utterance stress, when used neutrally—what we consider “normal” intonation contour—is usually associated with the end of a clause.

In the following sentence, “neutral” intonation means that the utterance stress does not make any major changes to the interpretation of the sentence:

Three children were sitting on the gray couch.

**intonation nucleus** most prominently stressed syllable in an utterance

In any given utterance, one stressed syllable stands out as most prominent. This stressed syllable is called the **intonation nucleus** (not to be confused with the nucleus of a syllable). This intonation nucleus can be moved and result in meaning changes; thus the phonological system interacts with meaning, the semantic system. Consider the change in meaning when various other words of the utterance receive more stress. (In these examples, the capitalized words indicate the intonation nucleus. They receive primary utterance stress and accompanying higher pitch.)

- a. Three CHILDREN (not women, elves, men, etc.) were sitting on the blue couch.
- b. Three children were sitting on the blue COUCH (not the chair, steps, etc.).
- c. Three children were sitting on the BLUE (not the purple, gray, black, etc.) couch.

Contrastive stress like that indicated by these examples rejects something and suggests that what is being rejected has been already introduced into the discourse or is implied.

**RPE** 4.16

There is evidence that intonational contours and patterns are stored in a distinct part of the brain from the rest of language. When someone experiences brain damage to the left side of the brain that seriously affects their linguistic abilities, making them unable to produce fluent or grammatical speech, they often maintain the appropriate intonation patterns of their language. When right-hemisphere damage takes place, the result may be that the patient speaks with a monotone. And when babies who have not yet acquired any words begin to babble at around 6 months of age, they often utter nonsense syllables using the appropriate intonation pattern of the language they are acquiring.

Other evidence of our unconscious knowledge comes from *ludlings* (from Latin *ludus* ‘game’ and *lingua* ‘language’). Children all over the world invent and pass on these ludlings (also called language games or secret languages), which distort the native language in some way, usually to prevent understanding by those who have not learned the language game. They are thus used primarily by groups attempting to conceal their conversations from others. Some common examples are Pig Latin, which is used all over the globe; the Gibberish family, prevalent in the United States and Sweden; Verlan, spoken in France; and numerous others.

Many of these ludlings show children’s awareness of and sophisticated manipulation of syllables, stress, and meter (or prosody). Pig Latin is one such language game, and it illustrates speakers’ awareness of the structure of syllables. The rules of the game are to remove the initial sounds of each word, move them to the end of the word, and add /e/ or /ey/. So *Pig Latin* is pronounced in the following way:

ig-pay atin-lay      /ig-pe ætən-le/

When the word begins with a consonant cluster, the majority of speakers of Pig Latin move the whole onset to the end of the word, so a word like *splash* would be:

splash = ash-splay      /æʃ-sple/

although some speakers separate the cluster, producing variations such as these:

plash	=	plash-say	/plæʃ-se/
lash	=	lash-spay	/læʃ-spe/

Such easy manipulations of syllable structure provide evidence for the speaker’s unconscious knowledge of syllables and syllable structure.

Consider another ludling called Ly, written first in phonemic transcription:

a. /hirli ɪzli ʌli mɔrli kəmli plɪli ketli ʌdli gemli/

and here alphabetically:

b. Here-ly is-ly a-ly more-ly com-ly pli-ly cate-ly ed-ly game-ly.  
‘Here is a more complicated game.’

So the rules of speaking the Ly language are to insert /li/ after each syllable. Here’s another ludling called Op.

a. /ðapə fəpʊt bapəl stape dapi apəm blapu dapawn/  
b. th-op-e f-op-oot b-op-all st-op-a d-op-i op-um bl-op-ew d-op-own  
‘The football stadium blew down.’

In the Op ludling one inserts /ap/ after the onset of each syllable. Note that when there is a consonant cluster, as with *blew* /blu/, the inserted /ap/ comes after that onset cluster and before the rime.



## Did You Know...?

**Abbish versus Ubbly Dubby**

In one elementary school, some children aged 7 to 11 were speakers of Abbish and others of Ubbly Dubby, though they all called their language Abbish (Denham 2005). The Ubbly Dubby speakers thought they were just “bad” speakers of Abbish, saying that they didn’t know it very well, that their version was different, or that certain speakers knew it better. All the children were able to understand each other. When the children discovered the rules of the language and realized that they were two different varieties, they all got very excited. They discussed the difference in stress and the ways in which the two varieties were like two dialects of the same language. Some of the younger children began to blend the two dialects, developing a third version of the ludlings. It was a genuine language community doing the things that languages do!

Comparing two common language-game languages, Ubbly Dubby and Abbish/Obbish, illustrates children’s knowledge of both syllables and stress. Consider the rules of each.

Abbish: Insert /ab/ between onset and rime. Stress is on the initial syllable.

/mábáy nábem ábíz mábörgəbón/ ‘My name is Morgan.’

Ubbly Dubby is very similar to Abbish but has a different vowel inserted and a different stress pattern.

Ubbly Dubby: Insert /əb/ between onset and rime. Stress is on syllable following insertion point.

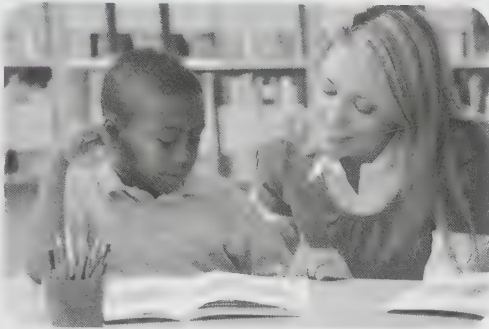
/məbáy nəbém əbíz məbörgəbón/ ‘My name is Morgan.’

RPE 4.17

## Accent on Linguistics and Reading

Think about all the things you read as you travel through your day—newspapers, text messages, textbooks, street signs, menus, e-mail, magazines,

blogs, T-shirts, food labels, directions, and many other things. How well could you live your life if you couldn’t read?



Have you ever thought about who taught you to read? As it turns out, teaching reading requires extensive knowledge of the sound system of language and of how sounds are represented on the page. Knowledge of phonetics and phonology is not only useful but in many ways essential in teaching children to read.

Many aspects of linguistic knowledge contribute to how we learn to read, but one key aspect is *phonemic awareness*—the understanding that words can be broken into units of sound. Learning to read requires understanding how phonemes can be mapped onto spellings of words. Though we think of reading as a visual activity, phonemic awareness is a crucial *acoustic* element of reading. Readers must decode the words, but this depends on being able to decode the sounds inside words, the sounds represented by letters. For example, learning to read requires understanding that in the word *bat* there are three sounds, that *bat* begins with the same sound as the word *boy*, that if you take away the first sound of *bat*, you have *at*, and so on. Children who have trouble with phonemic awareness also have trouble learning to read, and children who struggle learning to talk also have difficulty breaking words into their “sound parts.”

Learning to read also requires understanding the writing system of the language. The alphabetic English spelling system is obviously not phonetic (think of the ways that the spelling <gh> is pronounced in *ghost*, *through*, and *rough*).

Nevertheless, there is a system, and we have to understand this system to read. An understanding of phonemes and allophones helps teachers explain how different phonemes are represented by different spellings. Teaching spelling from a phonological perspective can show that the spelling system has a kind of logic. For example, teachers can approach teaching the spelling of the sound /m/ by showing students that the sound /m/ is spelled <m> at the beginning of a word (*mat*) but <m, mb, mn> at the end (*ram*, *dumb*, *autumn*).

What about teachers who teach children to read in a second language? Teaching reading to monolingual children has been a topic of much investigation, but we have yet to fully understand the best ways to teach reading to bilingual children. Knowledge of phonetics and phonology is crucial in understanding the kind of “transfer” a bilingual child might encounter in learning to read in a second language. Does literacy in one language help or hinder acquisition of literacy in a second language? Can literacy skills acquired in one language be transferred to acquisition of literacy in another language? Which skills transfer, and which don’t? Which methods and conditions favor transfer, and which don’t? This is a topic of study for many linguists and educators, and the Center for Applied Linguistics is devoted to providing resources and promoting research on literacy in our increasingly multilingual, multicultural society.

So, the next time you pick up a novel or magazine or log on to check e-mail, think about who taught you to read. Have you ever thanked him or her?

#### *For more information*

Center for Applied Linguistics. <http://www.cal.org/>.

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## Summary

In this chapter, we've examined some common phonological rules of English—assimilation, dissimilation, insertion, deletion, fronting, and metathesis. We've seen examples of these rules at work in our “standard” language, in child language, and in different North American dialects, as well as in earlier varieties of English. We have also examined some of the phonological processes that affect larger units of sounds, including syllables, stress, and intonation. We have seen that all of these processes are systematic and patterned and that they occur unconsciously.

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## Review, Practice, and Explore

### RPE 4.1 Allophones of [l] in English

There are three distinct allophonic forms of the phoneme /l/ in many English dialects, shown here as [l], [ɫ], and [ɭ]. Figure out the rule that determines when each allophone of the phoneme /l/ occurs. To do so, look at the sounds that occur on either side of the [l]s, and write what determines when each sound occurs.

[lɪp]	lip	[pɪɫ]	pill
[ləɪ]	lie	[aɪɫ]	isle
[pɛɪ]	play	[blu]	blue
[kɫu]	clue	[glu]	glue

Now look up each of the symbols and write the description of each of these allophones (in terms of place and manner of articulation and voicing).

#### RPE 4.2 Italian [n] and [ɲ]: Phonemes or Allophones?

Using the following words, determine whether [n] and [ɲ] are allophones of one phoneme or separate phonemes in Italian. Do the sounds occur in the same positions? Determine the environment in which each sound occurs; that is, look at the sounds that occur on either side of [n] and [ɲ] to see what determines when each sound occurs. If one sound always occurs before a certain natural class of sound, then the occurrence of that sound is determined by a phonological rule. What is that rule?

[nero]	black	[rana]	frog
[ʎente]	people	[aɲke]	also
[tenda]	tent	[faŋgo]	mud
[tinta]	dye	[tiŋgo]	I die

#### RPE 4.3 Korean [s] and [ʃ]: Phonemes or Allophones?

Using the following words, determine whether [s] and [ʃ] are allophones of one phoneme or separate phonemes in Korean. Do the sounds occur in the same positions? Determine the environment in which each sound occurs; does the sound always occur before a certain natural class of sound, and if so which one? (Adapted from Cowan and Rakušan 1985, 42)

[son]	hand	[ʃihap]	game
[sɔm]	sack	[ʃipsam]	thirteen
[sosal]	novel	[ʃinho]	signal
[sek]	color	[maʃi]	delicious
[us]	upper		

#### RPE 4.4 Hungarian [a] and [a:]: Phonemes or Allophones?

Consider the sounds [a] and [a:] (where : indicates a long vowel). Are these sounds allophones of one phoneme or separate phonemes? Determine the environment in which each sound occurs; do they occur in the same positions or different ones? (Adapted from Cowan and Rakušan 1985, 66)

[bamba:n]	foolishly	[a:g]	branch
[cafatoɫ]	tear	[a:da:z]	furious
[aga:r]	greyhound	[ba:mul]	wonder
[felad]	to give up	[ca:pa]	shark
[cimborafa]	collar beam	[cikorn <sup>y</sup> a:ʃ]	over-ornamented
[holta]	posthumously	[fela:za:ʃ]	soaking up
[oldal]	side	[ra:k]	crayfish
[ado:ʃ]	in debt	[a:bra]	illustration
[kortina]	curtain	[olda:ʃ]	solution
[rak]	to put	[ča:]	to the right



**RPE 4.5** A Variation of the Pluralization Rule

In the text, you saw the three plural endings involved in plural formation for most adult speakers of English. Children acquiring English sometimes have variations on this rule. Consider the following pronunciations of some plural words by a child between the ages of 2½ and 3 years.

a. bath	+	plural	=	/bæθəz/
b. knife	+	plural	=	/nəɪfəz/
c. cliff	+	plural	=	/klɪfəz/
d. self	+	plural	=	/sɛlfəz/
e. sleeve	+	plural	=	/slɪvəz/
f. horse	+	plural	=	/hɔrsəz/
g. fuzz	+	plural	=	/fʌzəz/
h. fish	+	plural	=	/fɪʃəz/
i. church	+	plural	=	/tʃɜrʃəz/
j. cat	+	plural	=	/kæts/
k. dog	+	plural	=	/dagz/
l. pup	+	plural	=	/pʌps/
m. pad	+	plural	=	/pædz/
n. kick	+	plural	=	/kɪks/
o. stamps	+	plural	=	/stæmps/
p. bib	+	plural	=	/bɪbz/
q. lamb	+	plural	=	/læmz/
r. can	+	plural	=	/kænz/
s. camel	+	plural	=	/kæməlz/
t. caterpillar	+	plural	=	/kæləpɪtərz/

This child's rule of plural formation seems to match the adult rule for the data in items (j) through (t)—although notice his metathesis of syllables in his pronunciation of *caterpillars*. However, the adult rule that adds /əz/ after sibilants is slightly different for him. After which sounds does the child add /əz/? Briefly discuss how this rule is similar to and different from the adult rule of plural formation, and consider how this child might have come to acquire this rule.

**RPE 4.6** A Different Variation of Pluralization

A well-known psycholinguistic experiment that has come to be known as the *wug* test, first conducted by Jean Berko Gleason (Berko 1958), presents children with made-up words and asks them to make them plural. For example, a child might be shown a picture of a fantasy creature and be told, "This is a wug. Imagine there are two of them. There are two \_\_\_\_." The children then fill in the blank. Very young children are able to do this quite easily, supplying the adult forms: /s/ after voiceless Cs, /z/ after voiced Cs, and /əz/ after sibilants.

In one experiment, the 4-year-old subjects produced a slight variation of the adult plural rule; again, as with the other child variation, the variation was only with the /əz/ form. The attachment of /s/ and of /z/ matched the adult rule, as shown in items (a)–(g):

a. cats	/kæts/	c. pups	/pʌps/
b. dogs	/dagz/	d. pads	/pædz/

- e. kicks /kɪks/      g. bibs /bɪbz/  
 f. stamps /stæmps/

Made-up words demonstrated a similar pattern:

- h. wug /wʌgz/      i. biff /bɪfs/

However, the plural forms in items (j) and (k) indicate that these children have a different rule when the word ends in a sibilant:

- j. fish /fɪʃ/      k. bunch /bʌnʃ/

Again, made-up words demonstrated a similar pattern:

- l. clush /klʌʃ/      m. tazz /tæz/

What is these children's rule of plural formation, and how does it differ from the adult rule? Briefly discuss how this rule is similar to and different from the adult rule of plural formation, and discuss how these children might have come to acquire this rule.

#### RPE 4.7 They Hissed, Banged, and Faded

- A. Determine the past-tense form of each of the following words. Remember to think phonemically here—ignore spelling. For example, the past tense of *dance* is /dænst/.

crush	turn	weed	wish	thrive	sift
kick	plow	hate	tuck	bag	bait
hiss	play	demand	botch	nab	import
heap	climb	pit	possess	breathe	relate
cinch	singe	tote	winch	bang	sand
pass	kill	pat	face	faze	fade

What are the three phonological forms of the regular English past tense? What natural classes of sounds determine the past-tense form used? What natural class of sounds does /t/ follow? What natural class of sounds does /d/ follow? What natural class of sounds does /ɪd/ (or /əd/) follow?

Notice that some of this assimilation has come into the spelling system. Consider *crept*, *slept*, *wept*, *leapt*. Can you think of others? Some words, such as *dreamed* and *dreamt*, have two distinct standard spellings and pronunciations in the past tense. Can you think of any others?

- B. In some dialects, there is a slight variation of the rule you have discovered already for past tense. Consider the following data from some high school students in Seattle (Dialect B):

	Dialect A	Dialect B
skinned	/skɪnd/	/skɪndɪd/
boned	/bɒnd/	/bɒndɪd/
burned	/bʌrnd/	/bʌrndɪd/

How is this past-tense rule different from the rule you already described?

**RPE 4.8** ➤ **Dissimilation**

The word *cardomom*, a kind of spice, is frequently pronounced as if spelled *cardomon*, with an /n/ at the end. Look up the following words in a good etymological dictionary to determine their origins. Explain the process of dissimilation that occurred to achieve the Present-Day English forms: *seldom*, *random*, *pilgrim*.

**RPE 4.9** ➤ **Schwa Insertion**

In many people's speech, a schwa sound is commonly inserted after a syllable ending in /l/ or preceding a syllable beginning with /l/.

realtor /riltər/	→	/rilətər/
athlete /æθlit/	→	/æθəlɪt/

Conduct a survey among your peers to determine whether the following words have a schwa inserted: *athletic*, *biathlon* (*decathlon*, *pentathlon*), *jewelry*. Can you think of others?

**RPE 4.10** ➤ **Where Have All the /l/s Gone?**

The deletion of /l/ before other consonants is in a state of flux in English. In most words in which /l/ is followed by another consonant, the /l/ is not pronounced by most speakers: *half*, *calf*, *walk*, *salmon*, *would*, *could*, *should*. This /l/ before a consonant had disappeared across the board by the time of Early Modern English (1500–1800), though it remained in the spelling. However, some people now pronounce the /l/ because of what we call a “spelling pronunciation,” an effect of seeing the /l/ in the word in print. (This has also happened with the /t/ of *often*, which used to not be pronounced but now is by some speakers, though not in *soften* or *fasten*.) Some words with an /l/ have two standard pronunciations, so you may hear *folk* or *psalm* with or without the /l/, though other /l/s before consonants are not pronounced by most speakers, such as in *yolk*. And though most speakers do not pronounce the /l/ in *half* or *calf*, those same speakers might pronounce the /l/ in *wolf* and criticize those who do not have an /l/ in *wolf*.

Consider the following and determine whether you have an /l/ in your pronunciation:

half, calf, walk, salmon, salve, palm, calm, talk, golf, wolf, Rudolph, elf, shelf, myself, always, folk, psalm

Are there some words that you can pronounce either with or without the /l/? If so, what do you think determines which pronunciation you use? What factors do you associate with particular instances of /l/-dropping in these words? Try to come up with other examples of words that have an <l> in the spelling but may or may not have an /l/ in the pronunciation.

**RPE 4.11** ➤ **Deletion of /r/ in American English**

Even the so-called standard American dialect that doesn't traditionally delete /r/ after vowels may delete /r/s elsewhere. Some Americans who regularly pronounce /r/ elsewhere do not have it in the middle of the word *governor*, for instance, although they may have it in *governing* or *government*. Can you suggest any reason for the loss of /r/ in the one word when it is retained in the other two?

Say the following words; in which ones do you pronounce the /r/s? Be careful not to be fooled by the spelling—you may think you have an /r/ where you really do not pronounce one. Then describe the circumstances under which the loss of /r/ occurs. Consider the position of the stress in the words and also whether there are other /r/s in the word.

surprise	mirror	February
thermometer	gubernatorial	temperature
vernacular	spectrograph	caterpillar
reservoir	southerner	particular
repertory	formerly	Arthur
wintergreen	paraphernalia	kindergarten

### RPE 4.12 Switching Sounds Around

Some words commonly involve sound exchanges, either as slips of the tongue or as dialectal variations. Describe the metathetic pronunciation of the following words, which are given following each word, and discuss anything that surprises you about these pronunciations.

integral /ɪntrəgəl/	foliage /fɔɪləʃ/
cavalry /kælvəri/	relevant /rɛvəlɪnt/
comfortable /kʌmfɪtəbəl/	strategy /strætəʒi/

Also look up the older forms of each of the following words, whose Present-Day English pronunciation is the result of metathesis. Give the older form of the words.

horse, run, frost

And finally, consider the word *iron*. How is metathesis at work in the standard pronunciation of this word?

### RPE 4.13 Slips of the Tongue

Slips of the tongue involve accidental manipulation of the building blocks of language: phonetic, phonological, morphological, and syntactic. For the following phonological slips, describe what happened from the intended utterance to the actual utterance, using the terminology from syllable structure.

Intended Utterance	Actual Utterance
a. play with fire	fay with plire
b. stoke the fire	stike the foire
c. take off your snowpants	snake off your toepants
d. fish net	fit nesh
e. I would name it . . .	I nould wame it . . .

### RPE 4.14 Where's the Stress?

Remember that the English stress system is quite complicated. In the following words, for example, the words in data set A and those in data set B follow two different stress rules. What are the two rules that determine which syllable is stressed in these groups of English nouns? The accent mark ´ indicates the primarily stressed syllable for most English speakers.



## Data Set A

synópsis  
veránda  
agénda  
consénsus  
amálgam  
uténsil

## Data Set B

cábinet  
América  
cínema  
aspáragus  
metrópolis  
jávelin

It will be useful to divide the words into syllables. Then examine the structure of the syllables that receive primary stress. Write a rule that describes which syllable receives primary stress.

**RPE 4.15** Da DUM da DUM da DUM da DUM da DUM

Do you recognize iambic pentameter? Recall that an iambic foot (one iamb) is an unstressed syllable followed by a stressed syllable, such as in the words *today* and *undo*. Shakespeare, among many other poets, used a lot of *iambic pentameter*, in which a poetic line consists of five iambic feet. Find or invent some examples of iambic trimeter (three sets of iambs), tetrameter (four sets of iambs), and pentameter (five sets of iambs).

Other terms from poetry of varied stress patterns are the following:

- Trochee** two syllables, stressed–unstressed, as in the words *lamppost* and *standard*
- Anapest** three syllables, unstressed–unstressed–stressed, as in the words *unperturbed* and *disengage*
- Dactyl** three syllables, stressed–unstressed–unstressed, as in the words *probably* and *imbecile*

Find examples of each of these in poetry as well.

**RPE 4.16** Watch Your Tone!

Place the intonation nucleus in at least two places in the following sentences, then describe the way the meaning changes when the intonation changes.

- I don't remember his name.
- Did you forget to lock the door?
- I hope she isn't too disappointed.
- I think we've run out of pullover sweaters.
- How can we persuade them to help?
- Her secretary wouldn't say where the client was.

**RPE 4.17** Rules of a Language Game

Here's an English-speaking children's language game called Pet. Using your knowledge of syllable structure, figure out and explain the rules of this language game.

/bɛtpɛtərpər lɛtpɛt ðæn pæn nəvpɛv ər pər/

Bɛtpɛttɛrpɛr lɛtɛpɛt θanpæn nəvpɛvɛrpɛr.

## Chapter at a Glance

**Morphemes and Meaning**

Morphemes and Syllables  
Recognizing Morphemes

**Word Classes**

Content Words  
Function Words  
Word Classes and Our Mental Lexicon

**Free and Bound Morphemes**

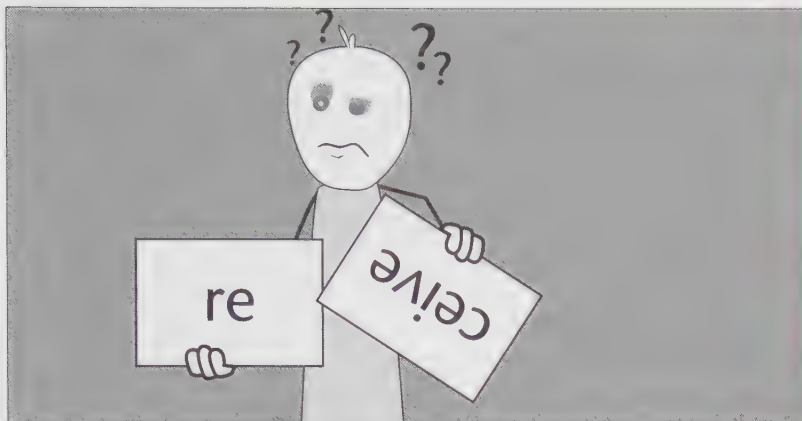
Affixes  
Roots

**Derivational Affixation****Affixation and Our Mental Lexicon**

Drawing Word Trees  
Word Trees and Ambiguity

**Inflectional Affixation**

Inflectional Affixation of English  
Nouns  
Inflectional Affixation of English  
Verbs  
Suppletive Verbs and Adjectives

**Summary****Sources and Resources****Review, Practice, and Explore**

# Morphology: Words and Their Parts

## Key Concepts

- We all have unconscious knowledge of word structure.
- Words can be divided into two basic classes: content words and function words.
- Morphemes are pieces of words that express their own meanings.
- Morphology helps us recognize words and possible words.
- Morphemes come in a variety of types; some can stand alone as words themselves, and others can't.
- *Affixes* attach to other morphemes according to specific rules.

## Did You Know . . . ?

Pooh on Pronouns  
Linguists in Hollywood

## Language Alive!

Embiggen His Soul!  
What about *Cranapple*?  
Word-*orama*!  
The Battle over *Whom*  
*Ain't* *Ain't* Had It Easy!

*Linguistics in the News* Arkansas's Apostrophe

*Accent on* Field Linguistics

*When ideas fail, words come in very handy.*

—JOHANN WOLFGANG VON GOETHE

**morphology** study of the system of rules underlying our knowledge of the structure of words

In this chapter and the next, we will investigate **morphology**, which, you might remember from Chapter 1, is the study of words and parts of words. As in the previous chapters, we will focus on uncovering unconscious knowledge, revealing what you don't know that you already know about the structure of words in your language.

What exactly do we know about words? What is a word? Knowing words includes knowing the meanings attached to combinations of sounds, but it is much more. Speakers share some kind of common knowledge that allows us to recognize words as English even when we don't all use the same vocabulary. We recognize nonsense words as English, and we recognize a child's words as English even though these words do not conform to those we use as adults. We even recognize words from earlier varieties of English that are no longer spoken. This understanding of "what is a word" comes from a vast amount of unconscious knowledge about the structure of words in our language. Morphology includes the study of the system of rules underlying our knowledge of the structure of words; the word *morphology* is from the Greek words *morph-* 'form/structure' and *-logy* (study). Morphology is closely linked to the study of our mental dictionary, or **lexicon**. The operations and systems we use to form words are called *word formation rules* or *lexical rules*.

**lexicon** our mental dictionary; stores information about words and the lexical rules that we use to build them

As we discussed in Chapter 1, the pieces or elements of any communication system are called signs. Signs can be iconic or non-iconic, where the relation between the form and the meaning of the sign is arbitrary. For example, English speakers call a domesticated feline *cat*; a Spanish speaker calls it *gato*; a Japanese speaker, *neko*; and a Witsuwit'en (spoken in northern British Columbia, Canada) speaker, *dus*. The words have the same meaning, but their forms are all distinct. Most words in a language, with the exception of **onomatopoeic** words, are non-iconic. The most obvious sign (in Saussure's sense, introduced in Chapter 1) in human language is the word, and though we all can recognize words, and we can certainly use them, it's actually rather difficult to come up with a definition of *word*. What would you say in response to the question, What is a word? You would probably find it much easier to simply provide examples—we all agree that *cat* is a word and that *eat*, *drive*, *xylophone*, and *flabbergasted* are, too. A working definition of *word* in oral language, then, might be

**onomatopoeia** use of a word for which the connection between sound and meaning seems nonarbitrary because the word's sound echoes its meaning



This iconic symbol indicates the location of an up escalator to people regardless of the language they speak.

## hwæt!

The onomatopoeic words for a dog's barking aren't the same in all languages; English = *woof*, *arf*, *bow-wow*, *ruff*; Arabic = *haw haw*; Indonesian = *guk guk*; Catalan = *bup bup*; Estonian = *auh auh*; and Russian = *gav gav*. Hear children making onomatopoeic sounds in their language at <http://www.bzzzpeek.com>.

“a sound or combination of sounds to which speakers attach meaning.” It's a good definition as far as it goes—but we'll amend this definition in the next section. A similar definition of *word* applies in signed languages: a word is a sign or combination of signs to which meaning is attached. In English and many other languages, words in print are separated by spaces, and it can be difficult to visually distinguish the words when the spaces are not there.

I wonder if you can read this without spaces as easily as you can when there are spaces between the words.

And of course, there are no spaces when we speak, and some languages' writing systems do not consistently separate words (Old English, Old Russian). Many languages of the world have no written version at all, but they all have words.

So, one way to try to get at the definition of a word is by meaning. We all know that words have meaning—*peace*, *elephant*, *rancor*—but we also know that many pieces of words have meaning too: *un-*, *-s*, *non-*, *-ed*. Once again, although explaining what a word is might be difficult, it's pretty clear that we nevertheless can identify not only the words in our language but other units within words that also have meaning. We call these meaningful pieces **morphemes**. Let's explore this concept in more detail in order to come up with a clearer definition of *word*.

## Morphemes and Meaning

**morpheme** smallest unit of meaning in a word

**syntactic category** set of words that share a significant number of grammatical characteristics (nouns, verbs, etc.)

Consider the following nonsense sentence:

The minnly erks yodded both thunkish blonks.

Speakers of English immediately recognize *the* and *both* in this sentence as English words. Though we don't know what the other words in the sentence mean, we can nevertheless deduce quite a bit about them. We would recognize *minnly* and *thunkish* as words in the same category as *lovely* and *pinkish*—namely, as adjectives—because of their *-ly* and *-ish* endings and because of their position in the sentence preceding *erks* and *blonks*, respectively. We know that *erks* and *blonks* are plural nouns because of their positions and because of their *-s* endings. We know that *yodded* is a verb, again because of its position but also because it ends in the past-tense suffix *-ed*. The form of a word, its suffixes and prefixes, therefore helps us determine the **syntactic category**, or part of speech (noun, verb, adjective, adverb, preposition, etc.) of the word. We return to syntactic categories later in the chapter. (And we discuss syntactic categories in more detail in Chapter 7.)



## hwæt!

We love word games!

*Scrabble*, for example, is now produced in thirty languages as well as in Braille; it's also available on a CD and online (free). Go to <http://www.mattelscrabble.com> to read the fascinating story about the invention of *Scrabble* more than 50 years ago.

This nonsense sentence illustrates that we have knowledge of morphemes—of words and meaningful parts of words—and that we use this knowledge to determine a number of things: the syntactic category of the word, whether the word is plural or singular, or whether it is in the past or present tense.

A morpheme is often described as the smallest unit of meaning in a word. On this logic, there are two morphemes in the word *pancake*, namely, *pan* and *cake*, both of which have rather obvious, recognizable meanings, and both of which are words by themselves. Other morphemes have meaning, too, though perhaps not in the dictionary sense. English speakers would probably all agree that there are three morphemes in *waspishness* (*wasp*, *-ish*, and *-ness*). We can say that the morphemes *-ish* and *-ness* have meaning because we recognize them as parts of words we easily combine with other parts to create words such as *pinkish* and *happiness*, and we also know that *-ish* and *-ness* can't be combined with *run* or *work* to create *\*runnish* or *\*workness*. So, although we might have difficulty defining the term *word*, we certainly know what a morpheme is, and we also know a complex set of rules that allow us to combine morphemes to create larger, meaningful units.

## Morphemes and Syllables

Be sure not to confuse morphemes with syllables; *Mississippi* has more than one syllable but is only a single morpheme, at least to speakers who are unaware that its origin, or **etymology**, is that it comes from the Ojibwa *misi-sipi* 'big river'. English speakers know that *miss* and *sip* in this word are not related to the English uses of those words.

Words can be **monomorphemic**, or made up of a single morpheme, such as *car* and *brown*, or **polymorphemic**, made up of more than one morpheme, such as *grammaticality*, *anthropomorphic*, *linguistics*, and *racehorse*.

Other examples of monomorphemic words (with more than one syllable) are *paper*, *pizza*, *Google*, *river*, and *catapult* (in this last word, *cat* is a syllable but not a morpheme—it is not related to the feline).

## Recognizing Morphemes

We use a variety of clues to identify morphemes. English has borrowed many morphemes from Latin and Greek, but as we saw previously with the discussion of *Mississippi*, we don't need to speak the language a word comes from in order to analyze its morphology. Take, for example, the word *transmission*. We may know that *trans-* is a morpheme because it occurs in many other words: *translation*, *transport*, *translate*, and so on. We may also know that *mit-* (which ends up being spelled *mis-* in *transmission*) is a morpheme from its appearance in words like *transmit* and *permit*. And finally, we know that *-ion* is a morpheme because

### etymology

historical origin of a word

### monomorphemic

consisting of a single (free) morpheme

### polymorphemic

consisting of more than one morpheme

we find it in *nation* and *translation*. We may not, however, know that *trans-* means ‘through’ in Latin and that *mit* comes from the verb *mittere* ‘to send’.

It may come as no surprise, then, that although all languages have words, speakers of all languages do not share the same morphological rules. Though we can apply our own English rules to words that come from other languages, it is much more difficult to identify morphemes in a language one does not speak. For this reason, the following Lushootseed sentence is difficult for a non-Lushootseed speaker to break up into morphemes. (Lushootseed is a Salish language of the Pacific Northwest.)

ošuhl čuhd t’uhbilhuhd  
made I rope  
‘I made rope’

Similarly, when we use the rules of one language to analyze a different language, the result can be a misanalysis. Consider, for example, the following place names in the Pacific Northwest, which are also the names of the Salish tribes in the region.

stuleg<sup>w</sup>abš (borrowed into English as *Stillaguamish*)  
s-tuleg<sup>w</sup>-abš  
noun-making prefix—river—people of ‘river people’

sq’ix<sup>w</sup>abš (borrowed into English as *Skykomish*)  
s-q’ix<sup>w</sup>-abš  
noun-making prefix—located upstream—people of ‘upstream people’

English speakers might think from the English spelling of these names that *-ish* is an adjectival suffix, the suffix that occurs in such words as *girlish* or *reddish* and also in such “nationality adjectives” as *Swedish* and *Spanish*. In Salish languages, however, *-abš* is completely different from English *-ish*; in Salish, it means ‘people of’.

We often *don’t* misanalyze words, even when we could. English speakers know that the *-s* at the end of *Massachusetts* is not the plural *-s* that occurs on English nouns because there is no singular *Massachusett*, nor do we treat *Massachusetts* as plural:

*\*Massachusetts are beautiful in the fall.* (Recall that *\** indicates

that the sentence or word is ungrammatical, odd-sounding.)

We can now amend our definition of *word*. Previously, we said that a word was “a sound or combination of sounds to which speakers attach meaning.” We might now say, after this brief discussion of morphemes, that a word is “a morpheme (*cat*) or combination of morphemes (*waspyishness*) to which we attach meaning.” In the following section, we’ll take a closer look at words and discuss how words can be broken down into two basic classes. We will then move on from there to discuss how words within those two classes can be broken down into morphemes in a variety of ways.

hwaet!

Keep your eye on the suffix *-ish*, which seems to be increasingly productive. *Suckish* is definitely a word now!

# Word Classes

Traditional grammar identifies eight parts of speech: noun, verb, adjective, adverb, preposition, conjunction, article, and interjection. You may be familiar with these terms because they are often taught in school and are used in writing handbooks and dictionaries. However, there are actually more categories, and here, consistent with current grammatical theory and the approach to syntax we take in Chapter 7, we will divide words up into the following syntactic categories (parts of speech): noun, verb, adjective, adverb, preposition, auxiliary verb, modal, determiner, quantifier, numeral, pronoun, degree word, and conjunction. Syntactic categories can in turn be divided into two word classes: *content* words and *function* words.

**content words**  
words with lexical meanings (nouns, verbs, adjectives, adverbs)

**open class** category of words that accepts new members (nouns, verbs, adjectives, and adverbs)

## Content Words

Nouns, verbs, adjectives, and adverbs are all **content words**, words with meanings that we can look up in the dictionary (Table 5.1). Content words are **open class** words, meaning that they accept new members. For example, *textmessage*, *e-mail*, and *fax* are all verbs (with noun counterparts) that have been recently added to the language, and new(ish) nouns include *blog* and *tofurkey*. Recent adjectives include *crunk*, *fetch*, and *satellic*; and *awesome* has recently shifted from being only an adjective (“That band is awesome”) to also being an adverb for many speakers (“That band plays awesome”).

Table 5.1 Content Word Categories with Examples

Noun	Verb	Adjective	Adverb
river, intelligence, Washington, sciss- ors, furniture, fax, blog, hashtag	discuss, remember, annoy, feel, gallop, seem, textmessage	unhappy, fortu- itous, beautiful, mad, tiny, crunk, chill, satellic	hopefully, mad- deningly, fast, still, now, often

**function words**  
words with functional meanings (determiners, auxiliary verbs, etc.)

**closed class**  
category of words that does not accept new members (determiners, auxiliary verbs, and conjunctions, among others)

## Function Words

In contrast to content words, **function words**, such as determiners and auxiliary verbs (which we discuss more in Chapter 7), do not have “contentful” meanings; rather, they are defined in terms of their use, or function (Table 5.2). For example, the meaning of the auxiliary verb *is* in *Leo is running* is difficult to define, but we can say that the function of the auxiliary verb *is* in this case is to express present tense (to see this, compare *Leo was running*). Function words are **closed class** words. Though we freely add new members to open classes of words, we don’t coin new determiners or conjunctions, nor do we come up with new pronouns, modal verbs, or auxiliary verbs (*have*, *be*, and *do*).

Table 5.2

## Function Word Categories with Examples

Determiner	the, a, this, that, these, those, his, my	Preposition	without, in, on, over, behind, above, around
Numeral	one, five, ten, second, eighth	Conjunction	and, or, yet, for, but, so, nor
Quantifier	all, each, every, both, some	Degree Word	very, so, quite, rather, too
Pronoun	they, he, she, her, theirs, mine, yours	Auxiliary Verb	have, be, do
		Modal	may, might, can, could, will, would, shall, should, must

Note that membership in a particular word class is not necessarily fixed. Just as words can belong to more than one syntactic category (such as a word that is both a verb and a noun—*e-mail*, for example—or an adjective and an adverb, like *fast*), some words share characteristics of both word classes. Prepositions are an example. We haven't added any new prepositions to the language in several hundred years, so in that sense prepositions form a closed class. And although their primary function seems to express information about the direction, location, and such of a following noun in English (*near/on* the table), many prepositions have quite complex, “contentful” meanings. Consider, for example, the meanings of the preposition *by*:

by the river                      by myself  
by Mark Twain                by mistake  
by boat

## Did You Know...?



## Pooh on Pronouns

If the English language had been properly organized . . . then there would be a word which meant both “he” and “she,” and I could write, “If John or Mary comes heesh will want to play tennis,” which would save a lot of trouble.

— A. A. Milne, *The Christopher Robin Birthday Book*

Even though there have been attempts to introduce a gender-neutral pronoun (one example was *thon*) in order to avoid generic *he* (as in *Each child should read a book. Then he should discuss it. and The astronaut must be very dedicated. He must undergo hours of rigorous training*), such attempts have largely failed, not necessarily because of resistance to gender-neutral terms (though that is part of it) but simply because pronouns are a closed class. Note that an alternative strategy, namely, to use plural *they* instead of *he* or *she*, is widely accepted because it does not involve introducing a new pronoun.



So, although we will assume here that prepositions are function words, note that this distinction is not entirely clear and that prepositions present an interesting case of the possible overlap between function and content word classes.

Another example of words that don't fit neatly into one category or another is degree words. Degree words are traditionally classified as adverbs, but actually behave differently syntactically, always modifying adverbs or adjectives and expressing a degree: *very*, *rather*, *so*, *too*. This is a relatively fixed class and new members do not enter it frequently. But consider the word *hella*; like other degree words, it expresses degree and can be used to modify adverbs or adjectives: *She's very/hella/so tall*. *Wicked* is also used in some dialects as a degree word: *I am wicked hungry!*

## RPE 5.2

## Word Classes and Our Mental Lexicon

Though sometimes the difference between content and function word classes can be rather fuzzy, there is a great deal of evidence that this basic distinction exists and that this distinction among classes of words is part of our fundamental knowledge of language. The fact that content words can take affixes, primarily inflectional morphemes, but function words cannot (except, as Eric Hyman notes, metalinguistically as in *no ifs, ands, or buts*) demonstrates that they are distinct kinds of categories.<sup>1</sup> Also, as we discussed in Chapter 2, children go through a telegraphic stage of language acquisition in which they omit function words and morphemes, saying things such as *go store* and *baby cry*, omitting function words such as *to* and *the*. This omission of function words might be because they can only store so many whole words in their working memories, and therefore words with lexical content take priority because they allow children to convey the most meaning with limited vocabulary.

Aphasia provides additional evidence that we store function words in our mental lexicons differently from content words. Recall that sufferers of Broca's aphasia tend to have great difficulty speaking and omit function words such as determiners, prepositions, and the verb *be*. The following excerpt is from an interview between neuropsychologist Howard Gardner (1974: 60–61) and Mr. Ford, a Coast Guard radio operator who had suffered a stroke three months earlier.

- Dr. Gardner: Why are you in the hospital, Mr. Ford?  
 Mr. Ford: Arm no good . . . speech . . . can't say . . . talk, you see.
- Dr. Gardner: What happened to you to make you lose your speech?  
 Mr. Ford: Head, fall, Jesus Christ, me no good, str, str . . . oh Jesus . . . stroke.

And finally, recall that the earliest speakers of Nicaraguan Sign Language, or *Idioma de Señas de Nicaragua*, who developed language after puberty (and

1. Thanks to Eric Hyman for pointing this out.

thus after the critical period), created a form of language closer to a pidgin than signers who were exposed to a more developed version of ISN at an earlier age. One of the characteristics of pidgin ISN was the lack of classifiers, signs that can be regarded as functional rather than contentful.

We will discuss lexical and functional categories in Chapter 7 on syntax, where we'll explore some of the distinctions among them in more detail.

### RPE 5.3

**bound morpheme**  
morpheme that  
must attach to  
another morpheme

**free morpheme**  
morpheme that  
can stand alone as  
a word

**affix** bound  
morphemes,  
including prefixes,  
suffixes, infixes, and  
circumfixes

## Free and Bound Morphemes

Morphemes, like words, fall into different classes. Morphemes are either **bound** or **free**. The words *drink*, *cat*, and *butter* are all free morphemes; they are single morphemes (monomorphemic) and can stand alone as words. Bound morphemes, on the other hand, are morphemes that cannot stand alone and must be attached to another morpheme or word. Examples of bound morphemes include *trans-* and *-mit* in *transmit*, *-ize* in *materialize*, and *un-* in *unhappy*. Bound morphemes themselves come in different types: *-ize* is a suffix, and *un-* is a prefix. Suffixes and prefixes fall under the more general heading of **affixes**, morphemes that attach to other morphemes or words by a process called *affixation*.

## Affixes

Let's take a look at affixes in more detail before we go on to discuss other types of bound morphemes. Some common examples of English prefixes and suffixes are the following:

**prefixes:** *dis-*, *un-*, *for-*, *anti-*, *semi-*, *hyper-*, *in-*, *en-*

**suffixes:** *-ment*, *-ion*, *-er*, *-ing*, *-s*, *-able*, *-ize*, *-ship*, *-ity*

Another type of affix is an *infix*, an affix that attaches within a word root. The Inuktitut language of Western Canada, a member of the Eskimo-Aleut language family, has an infix, *-pallia-*, which must be inserted into a verb root, resulting in a distinct form of the verb. The rough translation of this infix is *gradually*.

*nungup* + *pallia* + *jut* = *nunguppalliajut*

'They are gradually  
disappearing'

*ilinniaq* + *pallia* + *jugut* = *ilinniaqpalliajugut*

'We are gradually  
learning'

Although infixes occur in many other languages, there is only one basic type in English, **expletive infixation**. This infix has the effect of adding emphasis. The infix may only be inserted into words with more than two syllables, and it can range from the relatively tame *gosh darn* to the more powerful so-called F-word. In *My Fair Lady*, Eliza Doolittle sings about how nice it would be to sit *abso-bloomin'-lutely* still, where the infix is *bloomin'*. Native speakers of English have

**expletive infixation**  
process by which  
a morpheme is  
inserted inside  
another morpheme:  
*abso-bloomin'-lutely*

# Language Alive!

## Embiggen His Soul!

Though *em-/en-* + *-en* is not commonly used as a circumfix in English, we are still able to understand its two pieces and use them to create new—though perhaps surprising—words. An example comes from *The Simpsons* TV show, in which the founder of the fictional town of Springfield, Jedebiah Springfield, uses the word *embiggen*, appropriately attaching the affix to an adjective base when he sings “that a man might embiggen his soul.”

Thanks to Jason Cuniff for this example.

And one coining leads to another. Here’s another bit of dialogue from the show:

EDNA: Embiggen? I never heard that word before I  
moved to Springfield.

Ms. HOOVER: I don’t know why. It’s a perfectly *cromulent* word.

Thanks to Russell Hugo for this example.

intuitions about where in a word the infix is inserted. Consider where your favorite expletive infix goes in these words:

fantastic, education, Massachusetts, Philadelphia, Stillaguamish,  
emancipation, absolutely, hydrangea

Most speakers agree on these patterns, though there are some dialectal variations as well. You likely found that the infix is inserted at the following points:

fan-\*\*\*-tastic, edu-\*\*\*-cation, Massa-\*\*\*-chusetts,  
Phila-\*\*\*-delphia, Stilla-\*\*\*-guamish, emanci-\*\*\*-pation,  
abso-\*\*\*-lutely, hy-\*\*\*-drangea

The infix gets inserted before the syllable that receives the most stress, and it cannot be inserted anywhere else in the word.

absolutely = abso-flippin’-lutely

but not \*ab-flippin’-solutely, nor \*absolute-flippin’-ly

hydrangea = hy-freakin’-drangea

but not \*hydrang-freakin’-ea

Now, what happens when the first syllable in the word is the one that receives the most stress, as in the following?

basketball, underdog, Bellingham, institute, pickpocket

The rule is that when the first syllable is the one with the most stress, the infix is then inserted before the syllable that receives secondary stress in the word.

basket-\*\*\*-ball, under-\*\*\*-dog, Belling-\*\*\*-ham,  
insti-\*\*\*-tute, pick-\*\*\*-pocket

Now, nobody ever taught you this rule! It's a striking display of your unconscious knowledge of the rules of language and of how phonology and morphology interact.

Yet another type of affix is the *circumfix* (from Latin *circum-* 'around'); this type of affix surrounds another morpheme. German has a very common circumfix, *ge-* *-t*, which creates the perfective form of certain verbs.

kommen	'to come'
Er ist <u>ge</u> kom <u>mt</u> .	'He has come.' ( <i>ge</i> + <i>komm</i> + <i>t</i> )

And Samoan has a circumfix *fe-* + *-aʔi* which indicates reciprocity:

finau	'to quarrel'
fe <u>fi</u> na <u>aʔi</u>	'to quarrel with each other'

English does not use circumfixes as these languages do. Some researchers suggest that because the prefix *em-/en-* occurs only in words with the suffix *-en*, such as *embolden/enlighten*, that *em-/en-* and *-en* are not a prefix and a suffix but rather a circumfix. (The prefix *en-* becomes *em-* before /b/ for phonological reasons—can you explain why? What phonological process is at work here?) That we don't have words like \**embold* or \**bolden* provides additional evidence that in *embolden*, *em-/en-* plus *-en* is a circumfix; each affix must occur with the other. However, as *-en* does exist separately from *em-/en-* as a verbal suffix (*sharpen*, *tighten*, *sweeten*), *em-/en-* + *-en* may not be a true circumfix.

We add here a note on what are called **clitics**. A clitic is a morpheme that is phonologically dependent on another word but is grammatically independent, so in that way clitics are distinct from regular affixes. They involve at least some phonological reduction, as in the *not* of *do not* becoming /ənt/, written *n't*; the *to* of *want to* becoming /tə/ (and often written *wanna*); the *have* of *could have*, *would have*, *should have* becoming /ə/ (and often written *coulda*, *woulda*, *shoulda*). Clitics occur in a variety of languages and are the subject of much interesting debate since they are an interesting kind of hybrid between affixes and free morphemes.

## Roots

Let's take a look now at the types of morphemes that affixes can attach to. Affixes can attach to words: *-less* can attach to *friend* to derive *friendless*. In this case, the word to which *-less* attaches is a free morpheme, *friend*. We call *friend* in this case a **root**, a morpheme to which an affix attaches. If we attach *-ness* to *friendless*, on the other hand, *-ness* attaches to a word that is made up of two morphemes and is therefore not a single morpheme and thus not a root: *friend* + *less*. Let's take another example. If we attach *un-* to *cool*, the prefix *un-* attaches to a root, *cool*. If we attach *un-* to *forgiveable*, *un-* attaches to a word that is not a root but rather a word made up of three morphemes, *for* + *give* + *able*.

### RPE 5.4

**clitic** morpheme that is grammatically independent but phonologically dependent on another word.

**root morpheme** morpheme to which an affix can attach



**bound root morpheme** a non-affix morpheme that cannot stand alone

**productive rule** rule that regularly applies in the formation of new words or forms of words

Many of the roots of English words cannot occur alone like *friend* and *cool* can. Instead, they can occur *only* with prefixes or suffixes attached to them. For example, *-ceive* is a **bound root** because it occurs in words like *receive*, *perceive*, *deceive*, and *conceive*, in which it is clearly distinct from the *re-*, *per-*, *de-*, and *con-*, which all show up in other words, such as *return*, *permit*, *denote*, and *convince*, but *-ceive* cannot stand alone as a word. There is no word *ceive*, so we call it a bound root morpheme that must occur with another bound morpheme in order to be a word.

Morphological rules that regularly combine certain morphemes are called **productive rules**. So attaching *-ion* to verbs (*transmit* + *ion*, *communicate* + *ion*, *deactivate* + *ion*) is a *productive* rule of English morphology. Some morphological rules, on the other hand, are *not* productive: indeed, in English some morphological rules apply to create only a single word! To illustrate, consider the words *lukewarm*, *cranberry*, *inept*, and *unkempt*. We certainly recognize *warm*, *berry*, *in-*, and *un-* as regularly occurring morphemes in English because they occur in many other words (*rewarm/warming*, *huckleberry/strawberry/blueberry*, *inoperable/incredible/invincible*, *unthinkable/unhappy/unsafe*). The morphemes *luke-*, *cran-*, *-ept*, and *-kempt*, on the other hand, appear only in *lukewarm*, *cranberry*, *inept*, and *unkempt*. We don't use the term *lukecold*, nor do we use *cran-* anywhere other than attached to *berry*, and we don't ever say "He is an inept writer, but she is very ept" or "Her hair looked kempt". So the rules that attach *un-* to *-kempt* or *luke-* to *warm* are not produc-

tive; they derive only these words. We will also define morphemes such as *cran-*, *luke-*, *-ept*, and *-kempt* as bound roots because they cannot stand alone as free morphemes and because they don't occur as affixes in other English words.

So, to summarize this section, morphemes can be bound or free, and they can be roots or affixes. Roots can be free morphemes or bound ones, but affixes are always, by definition, bound morphemes. Affixes can attach to words in various ways,

as prefixes, suffixes, circumfixes, and infixes. In the following section, we turn our attention to affixation in more detail, discussing another way in which we can distinguish affixes: by dividing them into two different types, with different properties—derivational affixes and inflectional affixes.

hwæt!

The longest word in English is, purportedly, *pneumonoultramicroscopicsilicovolcanokoniosis*, a disease of the lungs.

RPE 5.5

## Derivational Affixation

**derivational affix** affix that attaches to a morpheme or word to derive a new word

Most of the examples of affixes in English that we have discussed so far have been of **derivational affixes**, affixes that attach to other morphemes to form new words that are separate entries in our mental dictionary, or lexicon. The affix *-able* attaches to verbs, deriving adjectives. The affix *-able* is therefore a derivational affix—an affix that derives a new word, a new dictionary entry.

# Language Alive!

## What about *Cranapple*?

You might be thinking that affixation of *cran-* to roots is a productive rule because you are familiar with the word *cranapple* or *crangrape*, advertising names for drinks that contain cranberry juice. Note, however, that this is the *only* place we see *cran-* attached to another morpheme, and one way to analyze this use of *cran-* is not as an affix attached to *apple*, nor even as a bound root, but rather as a *blend*. Blends are words that are combinations of two or more reduced words; a classic example is *smoke* + *fog* = *smog*. *Cranapple* can therefore be analyzed as a blend of *cranberry* + *apple* rather than as evidence that *cran-* affixation is productive, allowing *cran-* to be attached to roots other than *berry*.

### Derivational Affixes

verb		adjective
read		readable
like	+ -able =	likeable
think		thinkable

The affix *-ity* is another derivational affix. This affix attaches to adjectives to derive nouns, as illustrated in the following examples.

adjective		noun
serene		serenity
divine	+ -ity =	divinity
obscene		obscenity

Here are some other common derivational affixes and some of the words derived from them.

#### verb + *ment* = noun

excite	excitement
realign	realignment
deport	deportment
appease	appeasement

#### adjective + *ness* = noun

lonely	loneliness
happy	happiness
churlish	churlishness
bald	baldness

#### adjective + *ize* = verb

regular	regularize
sensational	sensationalize
legal	legalize

#### adjective + *ly* = adverb

fortunate	fortunately
possible	possibly
quick	quickly

In addition to derivational suffixes, English has a number of derivational prefixes, which productively combine with bound or free morphemes to derive new words.

un + happy  
dis + enchant  
semi + soft

Derivational prefixes and suffixes both derive new words, but the attachment of derivational prefixes usually results in a word of the same category as the word to which the prefix attaches. So, *happy* and *unhappy* are both adjectives; the prefix *un-* doesn't change the category of *happy*. The attachment of derivational suffixes, on the other hand, usually does result in a change in the category of the word; the adjective *happy* becomes the noun *happiness* with the addition of the suffix *-ness*. But notice that even though prefixes don't change the category of a word, they do create words with different meanings. *Happy* and *unhappy* are each listed separately in our mental lexicon (and in the dictionary). So, although prefixes in English do not change the category of a word (they do in many other languages), prefixes are nevertheless derivational affixes, changing the meaning of the words they attach to.

Like derivational suffixes, prefixes in English attach to words or roots of a particular category. For example, *ex-* attaches to nouns to derive nouns. *Ex-* cannot attach to verbs or adjectives:

***ex* + noun = noun**

ex-president  
ex-friend

***ex* + verb = \***

\*ex-mystify  
\*ex-activate

***ex* + adjective = \***

\*ex-modern  
\*ex-fixable

Here are a few more examples of prefixes in English and the words they can attach to:

***anti* + noun = noun**

anti-depressant  
anti-establishment

***de* + verb = verb**

de-activate  
de-nude

***in* + adjective = adjective**

in-eligible  
in-competent

## Language Alive!

### Word-orama!

In Present-Day English, we use *-(o)rama* as an affix (from the Greek root *horama* 'sight', *horan* 'to see'). The earliest example seems to be *pan-orama* (where Greek *pan-* means 'all'), 'a view at a glance', which was coined by painter Robert Barker in 1787. Today, we have words like *diorama*, *striporama*, and *audiorama*. This affix is also used to refer to something that is excessive or overdone. In either sense, we use it as a productive morpheme: "They gave you a trailer and all the donuts you wanted. It was a *donutorama*" (Oxford English Dictionary). For a Western Washington University student, "This week is *examorama*."



Courtesy of Rag-O-Rama

Because of the influence of other languages on English, derivational suffixes and prefixes in English typically fall into three basic etymological classes: Germanic, Latinate (including Latin and its descendants, primarily French), and Greek. Interestingly, although English is a Germanic language, Greek and Latin affixes are used far more productively than Germanic affixes to form new words. In fact, Present-Day English has more words with Latin and Greek roots and affixes than Latin and Greek had themselves! A few examples include *neo-Nazi*, *unibrow*, *pseudostudent*, *retrovirus*, *semisoft*, *autoimmune*, *Beatlemania*, *Ultrabrite*, *minivan*, *ex-boyfriend*, *megastar*, *metrosexual*, and *bootylicious*.

RPE 5.6

RPE 5.7

## Affixation and Our Mental Lexicon

Though our intuitions as speakers usually serve us well, there is sometimes variation in how words and morphemes may be stored in our lexicons. This variation is due in part to our varying knowledge of the etymologies of English words and our varying vocabularies based on our education and experience. Although most, if not all, speakers of English will recognize *-ed* as a morpheme in *mommucked*, even if we are not familiar with the word (which means ‘to harass or bother’ in the English dialect spoken on Ocracoke Island, North Carolina), not all of us break up words the same way. For example, consider the words *panic* and *pandemonium*. These seem to have a common root meaning something to do with terror or fear. In fact, *panic* comes from the Greek *panikon*, ‘pertaining to Pan’, where Pan was a god who inspired fright. *Pandemonium* was coined in the seventeenth century by John Milton in *Paradise Lost* as the name of the palace built in the middle of Hell. The word is a blend of Greek *pan-* ‘all’ (as in *panorama*) and Greek and Latin *demonium* ‘demon’. Though a Milton scholar might be aware that the *pan-* in *pandemonium* is not the same *pan-* of *panic*, many people might assume they are the same *pan-*, given the meanings of the words.

Let’s take a somewhat different example: *obscure*. Would you divide that word into two morphemes, or would you analyze it as monomorphemic? The word comes from *ob-* ‘over’ and *scurus* ‘covered’, a root that shows up in many Indo-European languages (it is the root of Germanic *sky* and Latin *scutum* ‘shield’). But to divide this word up, we would expect to find other words with *ob-* and other words with *-scure*. Can you think of any? If you can’t, then for you the word is likely monomorphemic and cannot be broken down into component morphemes.

So although many words are quite easy to break into component morphemes and all speakers of the language would do so easily and in the same way, others are not so straightforward. How you go about breaking words into morphemes depends on your goals in doing so as well. If we are simply trying to recognize the pieces of the word that have meaning, we



can research the etymology of the words and break them into the smallest units possible (for example, breaking *obscure* into *ob-* and *-scure*), but psycholinguists also aim to discover how we naturally store free and bound morphemes in our heads, and we likely do not store a bound morpheme such as *-scure*. Research shows that there is evidence that we build words up in our heads according to their meaningful component parts; for example, psycholinguistic experiments indicate that it takes subjects longer to respond to words that are made up of more than one morpheme than to

words made up of a single morpheme, even when the words are matched for length and frequency (factors that could affect reaction time). There is in fact evidence that we form words in steps, “building them” beginning with the root and then attaching the prefixes and suffixes. There is even evidence that we attach the prefix and suffix in a particular order, which we’ll explore in the next section.

Also, consider words like *cupboard* and *breakfast*. These are each formed historically from two free morphemes: *cup* and *board*, *break* and *fast*. However, most speakers likely store these items as whole chunks. We don’t think of *breakfast* as “breaking a fast” nor a *cupboard* as a board for cups. Even our pronunciation, with both vowels of *breakfast* altered from their pronunciation in the separate words *break* and *fast*, further suggests that the word is likely stored for most people as a single word in its entirety.

## hwæt!

If you like word games, check out <http://crickler.com> to find word puzzles for the computer age.

## Drawing Word Trees

Before we talk about how we can illustrate the ways in which we build words in our mental lexicons, let’s review some important information. As we have seen, when examining words made up of only two morphemes, we know two facts about the ways in which the affixes attach to other morphemes.

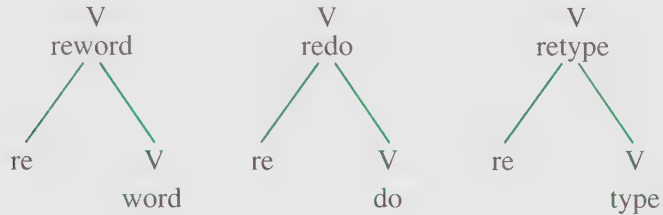
Affixes attach to certain syntactic categories: *-able* attaches to verbs (but not to nouns or adjectives), but *-ish* attaches to nouns (and some adjectives, but not to verbs):

*readable, drivable, breakable* but not *\*greenable* or *\*catable*  
*girlish, selfish, longish* but not *\*readish, \*breakish*

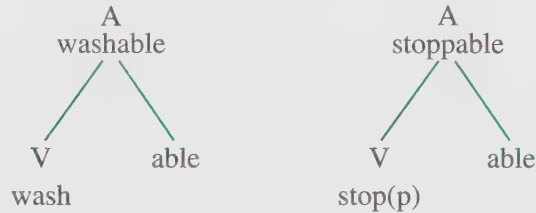
Affixes can determine the syntactic category of a word: Words that end in *-able* are adjectives, words that end in *-ish* are also adjectives, but words that end in *-ness* are nouns (*happiness, attractiveness, hopelessness*). These two facts are important for determining the steps by which words with more than one affix must be formed. Let’s look first at the word *reusable* and what we know about the affixes *re-* and *-able*. The prefix *re-* attaches to verbs and creates new verbs: *reword, redo, retype*. The affix *-able* attaches to verbs and forms

adjectives: *washable*, *stoppable*. Crucially, *re-* does not attach to adjectives: *\*rehappy*, *\*regreen*, *\*retall*.

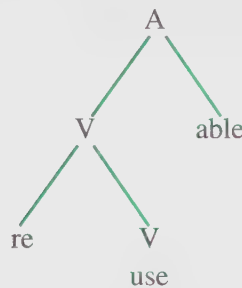
We can visually represent the way words are built with *word tree diagrams*. We know that *re-* attaches to verbs, and we can draw *reword*, *redo*, and *retype* in the following way:



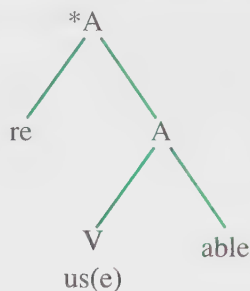
And we can draw *washable* and *stoppable*, too:



Now, let's consider how to draw a word formed in steps, such as *reusable*. The tree for this word requires different levels of structure if we are to represent how we store this word in our mental lexicon.



This is the only possible way to build this word; *re-* must attach first to *use* because *re-* attaches only to verbs. The suffix *-able* attaches to the verb *reuse* to form *reusable*. We know that this is the only one possible way to build this word, because *re-* cannot attach to adjectives (*\*rehappy*), and so we know that *re-* therefore cannot attach to *usable*. Thus, the following tree is not a possible structure that we build in our heads.



Take another example, the word *disengagement*. Does *-ment* attach to the word *disengage*, or does *dis-* attach to *engagement*? Both *disengage* and *engagement* are words, so how do we decide?

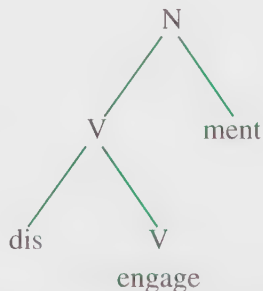
Evidence from other words with the affixes *dis-* and *-ment* can help clarify things. Consider, for example, the category of words that *dis-* attaches to.

*dis-* + *engage*, *trust*, *mount*

These examples suggest that *dis-* attaches to verbs, deriving other verbs. *Engage* is a verb, and that *dis-* attaches to it is exactly what we might expect. For *dis-* to attach to the noun *engagement*, however, violates this pattern. The evidence seems to suggest, then, that *dis-*, a prefix that attaches to verbs and verbal roots, attaches to *engage* rather than to *engagement*. On this logic, *-ment* must attach to *disengage*, a verb. In fact, the evidence supports the hypothesis that *-ment* attaches to verbs.

*engage*, *excite*, *entrap*, *enchant*, *discourage*, *contain* + *-ment*

The evidence from our analysis of *disengagement* suggests that complex words with more than one affix have internal, **hierarchical word structure** that reflects the order in which affixes attach. We illustrate with *disengagement*, supported by the evidence just discussed.



The morpheme *engage* in this example comes from the Latin morphemes *en* meaning 'make' and *gage* meaning 'pledge', so if your goal is to break the word into its smallest meaningful units, one could go this far; however, the word *engage* is an unanalyzable morpheme for most English speakers and so would be stored as such in our lexicons.

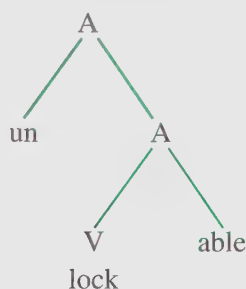
**hierarchical word structure** property of words whereby one morpheme is contained inside another.

## Word Trees and Ambiguity

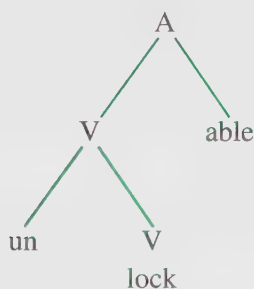
One final note on word tree diagrams is that they provide a way to express word ambiguities that would otherwise seem completely mysterious. Consider, for example, the word *unlockable*. This word is ambiguous because of the two possible meanings of *un-*. The two meanings of *unlockable* are explained in (a) and (b).

- a. *unlockable* 1: I can't lock the door because it is *unlockable*. = [un [lockable]]
- b. *unlockable* 2: I can unlock the door because it is *unlockable*. = [[unlock] able]

We can diagram the meaning of *unlockable* 1 in (a) as follows:



And a diagram of the meaning of *unlockable* 2 in (b) as follows:



This word is fairly unusual, however, in having two possible meanings and two possible structures, and it is due to the fact that there are actually two distinct *uns*. English has one *un-* that means ‘not’, and it attaches to adjectives. This is the *un-* that appears in *unlockable* 1. The other *un-* means ‘to reverse some action’, and it attaches to verbs. This is the *un-* that appears in *unlockable* 2.

RPE 5.9

## Inflectional Affixation

We’ve seen that we attach derivational affixes to words or roots to derive new words. Most derivational suffixes have the effect of changing the syntactic category, or part of speech, of a word. For example, *-ity*, added to



**inflectional affix**  
affix that adds  
grammatical  
information to an  
existing word

an adjective such as *divine*, creates a noun, *divinity*. A different class of affixes, **inflectional affixes**, do not change the category of the word to which they attach, nor do they create new dictionary entries. Rather, these affixes express grammatical information—information about case, tense, aspect, number, person, and so on, rather than changing meaning.

English has what is sometimes called a “poor” or “weak” inflectional system. This means that English has relatively little inflectional morphology compared to languages that have morphologically “rich” systems, systems that morphologically express case, gender, number, tense, and other grammatical relationships in productive ways.

English has only eight inflectional affixes, as shown in Table 5.3. As you can see, only English nouns, verbs, adjectives, and adverbs—all open classes of words—take inflectional affixes. Closed classes of words—prepositions, conjunctions, quantifiers, etc.—take no inflectional affixes in English.

Inflectional affixes always follow derivational ones if both occur in a word, which makes sense if we think of inflections as affixes on fully formed words. For example, the words *antidisestablishmentarianism* and *uncompartmentalize* each contain a number of derivational affixes, and any inflectional affixes must occur at the end: *antidisestablishmentarianisms* and *uncompartmentalized*.

We can also see from Table 5.3 that not only does English have few inflectional affixes but also that possessive, plural, and third-person singular are identical in form; they are all -s. The past participle affix -ed is also sometimes identical in form to the past tense affix -ed. This lack of distinction in form dates back to the Middle English period (1100–1500 CE), when the more complex inflectional affixes found in Old English were slowly dropping out of the language for a variety of reasons, discussed more in Chapter 11.

We might think that the overlap in forms of inflectional affixes would cause confusion and make English harder to learn than languages with unambiguous

Table 5.3 English Inflectional Affixes		
Nouns	Verbs	Adjectives
possessive -s Lee's book	3rd person, singular -s Lee walks	comparative -er Lee is taller.
plural -s six books	past tense -ed Lee walked	superlative -est Lee is tallest
	present participle -ing Lee is walking	
	past participle -ed/-en Lee has walked Lee has eaten	

inflectional endings. We might think, for example, that children would confuse verbs with nouns because both can be affixed with *-s*, but this is not the case. Children appear to have no problem mastering the English inflectional system. They also acquire inflectional affixes and function words in a particular order. For example, psychologist Roger Brown demonstrated that English-speaking children acquire inflectional affixes in the same general order; for example, the present progressive (aux + *-ing*, as in *is running*) is acquired before possessive inflections (*-s*, as in *the dog's ball*), which is acquired before regular third-person forms (*-s*, as in *She runs fast*) and so on (Brown 1973).

Also, children's acquisition of the plural inflection *-s* underscores the productivity of this affixation rule in English over other possible plural formation rules. Children typically overgeneralize *-s*, producing forms such as *gooses*, *deers*, and *childs*, before they master the adult irregular forms *geese*, *deer*, and *children*. The “regular” inflectional rule for plural in English thus appears to be *-s* affixation, and it is no wonder that new words in the language take this inflection in the plural rather than through a change in the vowel (*geese/mice*) by some affix other than *-s* (*-en* in *children* or *-i* in *foci*), or by nothing at all (*deer/elk*). We send *faxes* (not *faxi*) and *e-mails* (not *e-mailen*), and we create *blogs* (not *blog*). (We discuss the ways English forms plural nouns in more detail in the section “Inflectional Affixation of English Nouns.”)

Other experiments show not only that children can keep the inflectional affixes straight but also that children use information from inflectional affixes as clues to the syntactic category (part of speech) of a word. In an experiment with 3-year-old children (reported in de Villiers & de Villiers 1978), Roger Brown showed how children use grammatical clues to identify the part of speech of an unfamiliar (and in this case nonsense) word. Brown was interested in testing children's knowledge of the grammatical distinctions between count nouns (*dogs*, *chairs*), mass nouns (*rice*, *mud*), and verbs (*kick*, *eat*). He showed the children pictures that illustrated three unknowns: a person using a strange instrument to perform a strange action on a strange substance (for example, a person using a tool to knead a spaghetti-like substance). He explained each picture as follows:

Here's a picture of a *sib*. (count noun)

Here's a picture of *sibbing*. (verb)

Here's a picture of *some sib*. (mass noun)

He then showed the children pictures of each unknown—the tool, the action, the substance—and asked them to point to the picture of a *sib/sibbing/some sib*, and the children were able to consistently pick out the right picture. This suggests that children use grammatical clues to make such determinations, clues that include word order (position of *sib* or *sibbing* in the sentence), morphology (the *-ing* affix on *sibbing*), and the distinction between *a*, a determiner that precedes only count nouns, and *some*, a quantifier that precedes mass nouns (nouns that don't take a plural *-s*, such as *furniture* or *jewelry*: *some furniture/\*furnitures*, *some jewelry/\*some jewelries*, *some sib/\*sibs*).

Brown's experiment shows that we rely on morphological and syntactic clues to determine the syntactic category of a word. What about when morphological clues, such as inflectional affixes, aren't there?

In many varieties of English, inflections go unpronounced, but their meanings aren't lost because other clues help us recover them. In African American Vernacular English and Chicano/Hispanic English, for example, inflections can go unpronounced, as in *six bat flew over the barn* or *I read John book*. This "lack" of inflection is not really a lack at all; one way to analyze such constructions is that the inflection is deleted as the result of a regular phonological rule, consonant cluster simplification. Most speakers of English employ a version of this rule in phrases in which a consonant cluster precedes another consonant, such as in *band saw* and *cold cuts*, which are frequently pronounced as *ban saw* and *col cuts*. Utterances such as *six bat flew over the barn* or *I read John book* are stigmatized as "lazy" or "sloppy" English, but in fact the deletions here are the result of a systematic phonological rule. Moreover, consonant cluster simplification rarely results in ambiguity; speakers who employ this in some contexts do not reduce the cluster if doing so would result in ambiguity. For example, speakers would not delete the plural *-s* in *the bats*, because *the bat* would be ambiguous with respect to singular or plural. However, *six bat* is not ambiguous because the numeral already indicates plurality, so that *-s* would be more likely to be deleted.

We'll now take a look at each inflectional affix in English in more detail, beginning with the inflectional affixes that occur on nouns.

**RPE 5.10**

## Inflectional Affixation of English Nouns

Nouns take several kinds of inflectional affix in English. In this section, we will learn about number, case, and gender as they are expressed in English nouns.

### Number

**number** singular,  
plural, or other  
(dual) inflection

English nouns productively express **number** (plural or singular) in the form of *-s* (which may be dropped for speakers of dialects that include the consonant cluster reduction rule). As mentioned, new words coming into the language are typically inflected with *-s*, though plural inflection is expressed in a number of other ways in English. These other methods of marking plural come from earlier forms of English or from adopting other languages' (e.g., Latin, Greek) methods of marking plural, as the following words show:

**inflectional affix *-s*:** dogs, cats, hallucinations, decisions

**Latin plurals:** syllabus/syllabi, medium/media, ovum/ova

**Old English mutated (vowel) plurals:** goose/geese, tooth/teeth,  
mouse/mice, foot/feet

**Old English zero (affix) plurals:** deer/deer, sheep/sheep, fish/fish,  
moose/moose, elk/elk

**Old English *-en* plurals:** brethren, children, oxen

LINGUISTICS  
IN THE NEWS

## Arkansas's Apostrophe

Do people really care about punctuation? Well, yes, and some quite vehemently. Since the seventeenth century, when the notion of "correct" English was born, "correct" punctuation has been tied to "correct" behavior, which is in turn linked to education and social class. It matters a great deal to many people whether punctuation rules are followed or "violated."

One of the few remaining morphological case markers in English—the possessive *-s* affix on noun phrases—became the subject of a surprising amount of media attention, all because it involved a punctuation mark, the apostrophe.

In 2007, Representative Steve Harrelson, a Democratic member of the Arkansas legislature, introduced a resolution to declare, once and for all, the correct way to write the possessive form of the state's name—Arkansas's rather than Arkansas'. Harrelson proposed the resolution as a favor to a friend who felt very strongly about the issue. Expecting this resolution to pass without fanfare, Harrelson was surprised by the strength of the opposition. Apparently, the largest newspaper in Little Rock, the *Arkansas Democrat-Gazette*, fiercely opposed the resolution because it ran counter to the Associated

Press's punctuation rules. Suddenly, the proposed resolution was a political hot potato and, although he did not want to alienate the *Gazette*, Harrelson persevered, and his resolution passed unanimously in March 2007. Such resolutions are non-binding, but clearly this one touched a nerve; the controversy over the Arkansas "Apostrophe Act" was reported on many blogs and also made the national news, appearing in *The Boston Globe* and on FOXNews.

The furor over the apostrophe stems in part from the clash between spoken and written language. For example, in a "normal" possessive noun phrase, *-s* is affixed to a phrase ending in a consonant and, depending on the consonant, pronounced /z/ or /s/: *the dog's bone*, *the cat's paw*. When the noun is plural, the *-s* affix is pronounced the same way: *the dogs' bones*, *the cats' paws*.

If the possessive noun ends in a sibilant sound, such as /s/ or /z/, most style manuals give two options: *Ross' house* or *Ross's house* and *Roz' house* or *Roz's house*. Both forms are generally accepted (except, apparently, in Arkansas). However, no matter how we punctuate the possessive in writing, most of us pronounce the possessive morpheme /əz/ after a sibilant consonant: *Ross/əz/ house*, *Roz/əz/ house*.

So, it seems that *Arkansas*, which ends with the letter <s>, should be subject to the same (inconsistent) rule, and hence the debate. Perhaps the whole issue could be resolved if Arkansans based their punctuation on phonology rather than spelling. *Arkansas* ends in a vowel sound. From that viewpoint, the punctuation is clear; add *-s*, as we would for any name ending in a vowel (*Gino's*). What does this mean for *Illinois*? And for *Texas* and *Kansas*? Given the way people feel about apostrophes, who knows?

For more information  
Apostrophe Protection Society.  
<http://www.apostrophe.fsnet.co.uk/>. (14 January, 2008.)

DeMillo, A. 2007. Arkansas House backs Apostrophe Act. Associated Press. March 6.

Gambrell, J. 2007. Arkansas House to argue over apostrophes. Associated Press. *Boston Globe*, February 27. [http://www.boston.com/printer\\_friendly\\_news/nation/articles/2007/02/27/arkansas\\_house\\_to\\_argue\\_over\\_apostrophes/](http://www.boston.com/printer_friendly_news/nation/articles/2007/02/27/arkansas_house_to_argue_over_apostrophes/)

National Public Radio. 2007. Arkansans quibble over the possessive 's.' *All Things Considered*. February 28. <http://www.npr.org/templates/story/story.php?storyId=7648711>



**vowel mutation**

change of inflection through a change in vowel structure rather than through affixation

**pluralia tantum**

refers to a noun that is morphologically plural but semantically singular (*scissors*)

**grammatical**

**function** function of a phrase in the sentence as subject, direct object, indirect object, and so on

**nominative case**

case typically assigned to subject noun phrases

**accusative case**

case typically assigned to direct object noun phrases

**dative case**

case typically assigned to indirect object noun phrases

What we now consider the regular way of forming plurals, adding an *-s*, was only one of several ways of pluralizing nouns in older forms of English. Many nouns that have adopted the *-s* pluralization did not start out with it; for example, *eyes* used to be *eyen*, *shoes* used to be *shoon*, *hands* used to be *handen*, and *ears* used to be *earen*. As we'll see in the discussion of the history of English in Chapter 11, plurality also comes to be expressed through **vowel mutation**<sup>2</sup> rather than through affixation. Mutated plurals are now considered irregular because we don't use the process of mutation to form plurals in Present-Day English, but historically mutations followed a predictable pattern. And sometimes words have been added to the "irregular" patterns that didn't originally form their plurals in that way. For example, *moose* is a word borrowed from an Algonquin language and did not exist in Old English; however, by analogy with the other zero plurals, we form its plural in the same way as *deer* or *sheep*. Similarly, some words that end in *-um* or *-us* but are not of Latin origin, such as *cactus* and *octopus*, can have the non-English plural: *cacti* and *octopi*, though the historically "correct" plurals of these are *cactuses* and *octopuses*.

There also exist words in English, called **pluralia tantum** (from Latin, meaning 'plural as such'), that have a plural *-s* but refer to a single object.

scissors, pants, trousers, pliers, (\*scissor, \*pant, \*trouser, \*plier)

The fact that these words are morphologically plural but refer to semantically singular objects (with two parts) results in some dialectal variation. Most speakers use *pair* to individuate these words: *a pair of scissors*, *a pair of pants*; but some speakers can use the singular indefinite article and say *a scissors* or *a pliers*, treating these words simply as singular nouns, regardless of their *-s* ending.

## Case

Case can express the **grammatical function** of a noun phrase (the unit of words containing a noun, such as *the student*, *six dogs*, or *the Queen of England's crown*) as the subject, object, indirect object, or possessor (and some languages mark many other functions by case). In English, noun phrase subjects, objects, and indirect objects are not inflected for case at all.

- a. The student bought a car. (nominative/subject)
- b. Louise saw the student. (accusative/direct object)
- c. Louise gave a book to the student. (dative/indirect object)

The noun phrase *the student* does not change its form, whether the noun phrase is in the subject position, as in (a), or in the direct object position, as in (b). The noun phrase *the student* also does not change its form when it is in the indirect object position, as in (c). In other languages, however, subjects are marked with **nominative case**, and direct objects are marked with **accusative case**. Indirect objects are marked with **dative case**. In German, for example, case inflection shows up on the determiner that precedes

2. The term *mutation* here has nothing to do with hereditary or genetic change but is used as Merriam-Webster's first definition, "a significant and basic alteration."

a noun. In the following example, *der* is nominative, marking the subject; *den* is accusative, marking the direct object; and *dem* is dative, marking the indirect object.

<u>Der</u> Mann gibt	<u>den</u> Knochen	<u>dem</u> Hund
(nom./subj.)	(acc./dir. obj.)	(dat./ind. obj.)
the man gave	the bone	the dog

‘The man gave the bone to the dog.’

Because case is so clearly marked in German by the forms of the determiners that precede nouns, there is less dependence on word order to interpret grammatical function. That is, the noun phrases in the preceding German example can be rearranged without any loss in meaning.

<u>Den</u> Knochen gibt	<u>der</u> Mann	<u>dem</u> Hund.
(acc./dir. obj.)	(nom./subj.)	(dat./ind. obj.)
the bone gave	the man	the dog.

‘The man gave the bone to the dog.’

Word order in English, a language with little case morphology, is therefore more rigid than in languages with richer case morphology, like German.

RPE 5.11

## Did You Know...?



### Linguists in Hollywood

The language developed for the hit movie *Avatar*, called Na’vi, was created by linguist-turned-businessman Paul Frommer, Professor Emeritus of Clinical Management Communication, University of Southern California. Frommer developed a syntax for the language modeled on the structure of real languages; Na’vi is a case-marking language, which uses a system much like that found in Basque, Eskimo-Aleut languages, and Panoan languages of South America. The Na’vi language has quite a following, and continues to develop with the help of its “speakers.” Become a follower by visiting Frommer’s blog about the language <http://naviteri.org/>, and learn more about the structure of the language at <http://www.learnnavi.org/navi-grammar/>.

Na’vi was not the first language to be developed for a science fiction film. Klingon, the language used in many *Star Trek* films, was created by linguist Marc Okrand in the 1980s. He has since written two books on Klingon. And noted linguist Victoria Fromkin, who died in 2000, and is perhaps best known for her collection and analysis of slips of the tongue, developed the language Pakuni used by the primate-like creatures on the 1970s TV series *Land of the Lost*. So creating a language spoken by “aliens” is yet another interesting career option for someone with training in linguistics!

**genitive case** case typically assigned to possessive noun phrases

**Pronouns and genitive case** English expresses case distinctions in only two ways: on pronouns and in possessive (**genitive**) noun phrases.

Pronouns substitute for full noun phrases and, as you can see next, have different forms.

- a. She bought a car.
- b. Louise saw her.
- c. Louise gave a book to her.

In (a), the subject pronoun *she* is in nominative case, and in (b), the pronoun *her*, a direct object, is in accusative case. There is no distinction between accusative and dative case in English, so direct object pronouns and indirect object pronouns, such as *her* in (c), have the same forms. This nominative/accusative difference is expressed in other pronouns in English, as the following examples illustrate.

**Nominative case**

He bought a car.  
They bought a car.  
We bought a car.

**Accusative case**

Louise saw him.  
Louise saw them.  
Louise bought a car for us/them/him.

The other way that English expresses case morphology is on possessive noun phrases and pronouns. First, look at how pronouns express possessive, or genitive, case:

My/his/our book  
The book is mine/his/ours

Table 5.4 shows how English personal pronouns morphologically express case (as well as number and gender).

Genitive case is also marked by the affix *-s* on the noun phrase possessor in phrases such as *the Queen of England's crown*. This case marking shows up as *-s* in written English.

Louise saw the student's car.

RPE 5.12

Table 5.4 English Personal Pronouns

Person	Number and Gender	Nominative	Accusative	Possessive
1st	singular	I	me	mine
	plural	we	us	ours
2nd	singular	you	you	yours
	plural	you	you	yours
3rd	singular masculine	he	him	his
	singular feminine	she	her	hers
	singular neuter	it	it	its
	plural	they	them	theirs

# Language Alive!

## The Battle over *Whom*

Which are you more likely to say?

Whom did you talk to?

Who did you talk to?

If you answer *whom*, you probably do so because it is a form that you were taught (by grammar-conscious parents or teachers). But really, you probably rarely, if ever, use *whom* in your conversations.

“Use *who* for subjects and *whom* for objects.” This prescriptive grammar rule has a long history beginning in the seventeenth century in England. But in spite of efforts to maintain *whom* as the object pronoun, its usage has been in decline for centuries. (Chaucer, author of the *Canterbury Tales*, which he wrote over a period of years between 1386 and 1400, did not even use it consistently and instead used *who*.) It is interesting to note, however, that while use of *whom* is declining, the use of other object pronouns, such as *me* and *him*, is not.

This is the only case marking that Present-Day English has on noun phrases.

## Gender

**grammatical gender** masculine, feminine, or neuter inflection realized on words that has no relation to biological gender

Many languages distinguish nouns in terms of **grammatical gender**—as masculine, feminine, or neuter. Old English divided nouns in this way; for example, the noun *bāt* ‘boat’ was masculine, *scip* ‘ship’ was neuter, and *brycg* ‘bridge’ was feminine. Despite our inclination to think otherwise, grammatical gender is just that: grammatical rather than biological.

In Germanic languages, such as Old English and German, all nouns are specified as masculine, feminine, or neuter. Function words that introduce these nouns, as well as adjectives that modify the nouns, must also *agree* in inflection (gender, case, and number) with the noun. So, the Old English masculine, nominative, singular noun *bāt* must be introduced by a masculine, nominative, singular function word, namely *se* ‘this/that’.

*se* = masculine, nominative, singular

*bāt* = masculine, nominative, singular

*se bāt* = ‘this/that boat’

The noun *scip*, on the other hand, is neuter, singular, and nominative, and the form of *this/that* that agrees with the inflection is *þæt*, and the adjective *gōd* must also agree, and so appears as *gōde*. (The runic symbol <þ> has been replaced by <th> in Present-Day English. See Chapter 11 for more discussion of runes.)



*þæt scip* ‘this/that ship’

*þæt* = neuter, nominative, singular

*scip* = neuter, nominative, singular

*þæt gōde scip* ‘this/that good ship’

*gōde* = neuter, nominative, singular

French expresses grammatical gender in a similar way; nouns are either masculine or feminine (there is no neuter gender in French). Determiners and adjectives that modify nouns must agree in gender with the noun; note how the determiners vary (*la* is feminine and *le* is masculine) and also how the adjective for ‘white’ changes from *blanche* (feminine) to *blanc* (masculine) to agree with the gender of the noun.

<i>la lune</i>	<i>la lune blanche</i>
‘the moon’	‘the white moon’

<i>le livre</i>	<i>le livre blanc</i>
‘the book’	‘the white book’

Though *la lune* ‘the moon’ is feminine in French and masculine in German (*der Mond*), and though *fille* ‘girl’ is feminine in French, *Mädchen* ‘girl’ in German is neuter. This is what we might expect, given that grammatical gender is not equivalent to “real-world” notions of gender but is rather a grammatical inflection. This is not to say that words can’t express **biological gender**; they most certainly can. English pronouns *he/him* and *she/her* express (masculine and feminine) biological gender, but other pronouns do not. *They/them*, *we/us*, *you*, and *it* are unspecified for biological gender. The words *man*, *woman*, *filly*, *bachelor*, *wife*, and *rooster* are each specified as masculine or feminine, but these specifications have no grammatical effect.

**biological gender**  
masculine or  
feminine inflection  
that expresses  
biological gender of  
the object a word  
represents (*him/her*)

#### RPE 5.13

## Inflectional Affixation of English Verbs

The English verb system is surprisingly complex, even though verbs in English take only the following four different inflectional affixes. We will discuss the function of each affix and in doing so provide an overview of the different morphological forms of verbs in English.

third-person singular -s

past tense -ed

progressive -ing

past participle -ed/-en

**infinitive** base  
form of the verb, in  
English preceded by  
*to* (*to walk*)

## Infinitives, Present Tense, and Past Tense

The form of the verb that has no inflection at all is the **infinitive**. In English, infinitives can be preceded by *to*, as in *to go*, *to walk*, *to eat*. The only form

of the verb in the present tense that expresses tense inflection is the third-person singular form, which is affixed by *-s*.

I/you/they/we	sleep, collapse, run, eat
he/she/it	sleeps, collapses, runs, eats

When we take a look at the past-tense forms of English verbs, things get a bit more complex. Many English verbs form the past tense with the affix *-ed*, as in *walked* or *chased*. Other verbs form the past tense by vowel mutation: by a change in the vowel rather than by adding an affix. Some examples of mutated forms include the past tenses of *run*, *sing*, and *drink*: *ran*, *sang*, and *drank*. Still other verbs form the past tense by both vowel mutation and affixation, as in *sleep/slept*, *keep/kept*, *buy/bought*.

We	walked, chased
	ran, drank, sang, ate
	slept, bought, kept

Though mutated forms are often called irregular, they follow regular patterns that you are very familiar with. In fact, you can easily make up mutated forms for past-tense verbs. The mutated past tense of *fling* could be *flang*, or that of *slink* could be *slank* (by analogy with other words: *sing/sang*, *drink/drank*). We can also make up examples of verbs with both mutated vowels and affixation: *bleek/blekt*.

Verbs that express inflection (such as tense) through vowel mutation alone are called **strong verbs**, and verbs that express inflection only through regular affixation (of *-ed*) or through vowel mutation and some other kind of suffix, such as *-t* (*buy/bought*, *keep/kept*), are called **weak verbs** (the terms *strong* and *weak* have nothing to do with the typical meanings we associate with these words!). Some of the formerly strong verbs that have become weak in Present-Day English (so they have acquired the “regular” affixation rather than a vowel change) include *bow/bowed*, *brew/brewed*, *burn/burned*, *climb/climbed*, *help/helped*, *mourn/mourned*, *row/rowed*, *step/stepped*, and *walk/walked*. The strong past tense form of *climb*, for example, used to be *clumban* in Old English, and that of *step* was *stop*. Look up the etymology of the others in the *Oxford English Dictionary*! And some verbs that used to be strong verbs have strong forms only as adjectives: from *cleave* we have *cloven*, from *melt* we have *molten*, and from *swell* we have *swollen*.

In contrast to English, many languages have far more inflectional affixes for verbs. This complexity is illustrated by the present tense of the Icelandic verb for ‘buy’ and by the present tense of the Old English verb ‘love.’ As you can see, both languages have a number of distinct affixes; these express tense, person, and number (singular or plural).

keypti	I buy	kepytum	we buy
keyptir	you (sg.) buy	kepytudh	you (pl.) buy
keypti	he/she buys	kepytu	they buy

**strong verb** verb that expresses inflection through vowel mutation

**weak verb** verb that expresses inflection through regular affixation and sometimes vowel mutation

RPE 5.14

**lufian, to love**

ic lufie	I love
þu lufast	you love
heo lufað	he/she loves
we lufiaþ	we love
ge lufiaþ	you love
hie lufiaþ	they love

**Present and Past Participles**

**participle** form of the verb that follows an auxiliary verb *have* or *be*

The affixes *-ing* and *-en/-ed/-t* occur on English **participles**, the forms of main verbs that occur with auxiliary verbs *have* and *be*.

- Julia is talking to George. (talking = present participle)
- Julia has talked to George. (talked = past participle)
- George has eaten the apple. (eaten = past participle)

Though the auxiliary verb *be* is typically followed by a present participle (*V + ing*), in the passive voice, the auxiliary *be* is followed by a past participle:

- active:** George ate the apple.
- passive:** The apple was eaten by George. (eaten = past participle)

When the past participle is formed with *-ed*, it is identical to the past-tense form. Remember that the difference is that the past participle occurs in construction with a form of *have* (*has, have, had*).

- Julia has talked to George. (talked = past participle)
- Julia talked to George. (talked = past tense)

As with the past tense, the past participles of some verbs are formed by vowel mutation, and others are formed by both vowel mutation and an affix.

- Julia has run, has drunk, has sung . . .
- Julia and George have brought, have slept, have crept . . .
- George had written, had bitten, had bought . . .

**RPE** 5.15

Table 5.5 shows the different verb forms we’ve discussed here.

Table 5.5 **Standard English Morphological Verb Forms**

Infinitive	(to) walk	(to) eat	(to) drink	(to) go	(to) bring
Present tense	walks	eats	drinks	goes	brings
Past tense	walked	ate	drank	went	brought
Present participle	walking	eating	drinking	going	bringing
Past participle	walked	eaten	drunk	gone	brought

*Participles as markers of social class* When we stigmatize a way of speaking, a particular use of a word or an accent, claiming that certain usage is bad grammar or sloppy English, we are basing our opinions on social attitudes rather than on linguistic facts. Participles are often markers of social class (as reflected in the following quote from Carl Sandburg: “*I never made a mistake in grammar but once in my life and as soon as I done it I seen it*”). We’ll see, though, that what we often label bad grammar is really the result of a linguistic pattern that has been around as long as the Old English epic poem *Beowulf*.

Because of the overlap in the past-tense and past-participial forms of many verbs (such as *walked*: *I walked. I have walked*), a common process in English is to extend this pattern to other verbs, even those whose past-participle form is different from the past tense. This pattern of regularization gives rise to two possible past participles, one that is identical to the past tense (following the same pattern as *walk*) and one that is not. For some verbs, neither form is particularly stigmatized for most North American English speakers. Consider these examples of verbs with two past-participle options: *I have sewn* or *I have sewed*, *I have shaven* or *I have shaved*, *I have mown* or *I have mowed*, *I have proven* or *I have proved*. But other verbs that follow exactly the same pattern are considered nonstandard and remain stigmatized: *I have sung* (more standard), *I have sang* (less standard); *I have drunk* (more standard), *I have drank* (less standard).

Yet another way in which past participles are changing and varying is that the past-participial form is used for the past tense. This variation is more highly stigmatized than the others we’ve discussed so far. *I saw* (more standard), *I seen* (less standard); or *I grew* (more standard), *I grown* (less standard).

The different forms of the past participle sometimes have different social uses. For example, the past participle of *strike* is *stricken* or *struck*, but the former is used primarily as a legal term (which is why *stricken* sounds bizarre in the context of baseball).

The defendant’s statement was stricken from the record.

The defendant’s statement was struck from the record.

\*The first baseman was stricken by the ball.

The first baseman was struck by the ball.

The same is true of the verb *hang*: The past participial form *hanged* is preserved only in the context of capital punishment but not in everyday use applied, for instance, to hanging a picture.

The defendant was hanged.

The defendant was hung.

\*The picture was hanged on the wall.

The picture was hung on the wall.

And finally, consider the following verb patterns, which illustrate yet another interesting fact about the strong verb system. Some speakers have created a new form of the past participle by affixing *-(e)n*, which is a common way to form a past-participial form, thus distinguishing the past participle from the



past tense. *I have bought* (more standard) or *I have boughten* (less standard); *I have put* (more standard) or *I have putten* (less standard); *I have cut* (more standard) or *I have cutten* (less standard). These newly affixed forms are quite common and are becoming standard among many speakers in various parts of the country. (These forms seem more common when a vowel follows, so *I have cutten all the meat* is more likely than *I have cutten the meat*.<sup>3</sup>)

All the variation that exists with respect to the past-participial forms of verbs suggests that we are torn right now (unconsciously, of course) about the past participle: either making a distinction where one has been lost (generalizing *-en* as a past-participle affix and attaching it to the past tense form) or letting go of the distinction (using the same form of the verb for the past tense and the past participle). Such examples illustrate well how the language that we usually see as quite fixed and standardized is indeed still changing, and such changes can even come into the standard language.

## Suppletive Verbs and Adjectives

**suppletion** process of change whereby one form of a word has no phonological similarity to a related form of that word

Some verb forms seem to be completely unrelated to the infinitival form of the verb: *go/went*, for example. This is called **suppletion**: one form of the verb has no phonological similarity to another. Usually there is a historical reason for this; the current conjugation of *go/went*, for example, comes from two distinct Old English verbs, *gan* and *wendan* (related to the word *wend*: *I wended my way home*). It's hardly surprising that children produce *goed* before they learn suppletive *went*.

Suppletion is not confined to verbs; consider the comparative and superlative forms of the adjectives *good* and *bad*. These are also examples of suppletive forms.

good/better/best  
bad/worse/worst

As we might expect, children acquire the basic form of the adjective and produce forms such as *gooder* and *goodest*, *badder* and *baddest* until they master the more idiosyncratic *better/best*, *worse/worst*.

And perhaps the most obvious example of suppletion in English is illustrated by the forms of the verb *be*, as you can see in Table 5.6.

The notoriously irregular forms of *be* have an interesting history. *Bēon* was used in the present tense, and the past-tense and present-participle forms derived from a different verb, *wesan*. These two distinct verbs led to the familiar but quite “irregular” pattern we have today. In most languages, the verb that means ‘to be’ is irregular because it is used so much. That makes it more susceptible to change. Some dialectal variations of *be* are common within other dialects, such as *I be working/they was working/I were working*. We discuss some of these patterns more in later chapters.

RPE 5.16

RPE 5.17

3. Thanks to Jason Cuniff for this insight. Subsequent data collection bears this out, at least among speakers in the Pacific Northwest.

Table 5.6 The English Verb *Be*

Person	Present	Past
I	am	was
you	are	were
he/she/it	is	was
we	are	were
you	are	were
they	are	were
Past participle	been	
Present participle	being	
Infinitive	(to) be	

## Language Alive!

### *Ain't* Ain't Had It Easy!

Did you learn that *ain't* was a bad word and that if you used it, you'd sound uneducated or at least careless in the way you express yourself? Well, there ain't really nothing wrong with *ain't*.

*Ain't* first appeared in print with this spelling in the late 1700s, though it had been around long before that—at least a century—with the spelling *an't*. It seems to have started as a contraction for *amn't* (*am not*), but probably because it's awkward to say the two nasals (*m* and *n*), *amn't* was usually reduced to *an't*. Some other common contractions also appeared in the Early Modern English period—Shakespeare uses many—including *don't*, *won't*, and *can't*. And though most of them became quite standard, *ain't/an't* came under attack. In Present-Day English, *ain't* is stigmatized even though linguistically it is formed by the same rule speakers use to form *aren't* and other nonstigmatized contracted auxiliary verbs. Look at the gap that *ain't* fills, allowing contraction of the verb and *not*:

I am not	→	<i>I ain't</i>	we are not	→	we aren't
you are not	→	you aren't	you are not	→	you aren't
(s)he/it is not	→	she isn't	they are not	→	they aren't

*Ain't* can now be used not only with the first-person singular *I* but with other subjects as well. Though it is highly stigmatized, there is nothing linguistically wrong with it; in fact, *ain't* is used by many speakers in certain fixed expressions and to convey a certain rhetorical effect: *It ain't over yet! You ain't seen nothing yet. If it ain't broke, don't fix it.*

## Accent on Field Linguistics

Farah Nosh/Getty Images



As you've probably figured out by now, in order to study language scientifically linguists rely on data from a wide range of languages and language families. Where does this data come from? And how do researchers gather such data, especially when they don't speak the language in question? What methods does a researcher use to gather data from a speaker who not only speaks a different language but may also come from a vastly different culture?

There are many sources of written, well-studied languages, but what happens when we want to study a language without written records—no audio recordings, grammar books, or dictionaries, and no classes? What if all we have is access to the language's native speakers? How do we go about studying a language "from scratch," and how in the world do we figure out the phonology, morphology, and syntax of a language that no one has ever studied before?

Studying a language "from scratch" is the focus of field linguistics, which is not a theory of language but a methodology (see Munro 2001).

Field linguistics is also called *descriptive* linguistics, the process of describing a language based on work with native speakers. It has long been associated with anthropology, and field

linguists are often housed within anthropology departments. Linguists who do such work must not only be experts in language but must also be able to elicit data from speakers without violating cultural rules. They must also be able to determine whether that data is really representative of the speakers' natural language or whether it is shaped by, for example, what native speakers think the researcher wants to hear. This is no small feat! It sometimes takes years to achieve the trust and familiarity with native speakers required to really understand how the language works.

You don't need to travel to exotic places to do field linguistics, though many researchers do. Speakers of indigenous languages are not necessarily confined to inaccessible places, and many languages have yet to be described and analyzed. The photo shows linguists Erma Lawrence and Jordan Lachler in Alaska working to preserve the Haida language.

Computers and the Internet make gathering data and creating databases much easier, which contributes to cataloguing and, one hopes, preserving some of the world's disappearing languages—and in so doing, preserving disappearing cultures.

Field linguistics keeps linguists honest, often recovering data that challenges prevailing assumptions about language. For example, it was long assumed that the most basic orders of languages were SVO (subject, verb, object) and SOV, and that VSO and VOS were not found. But field linguists researching Amazonian languages found much evidence to the contrary, describing languages with both OSV and OVS order, giving rise to a shift in how we look at language typology (see Derbyshire & Pullum 1981 for discussion). Such discoveries shift and challenge conventional wisdom, an essential part of scientific study.

*For more information*

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## Summary

In this chapter, we have explored our complex knowledge of words and how they are made up of one or more morphemes. We have examined different types of morphemes, how they can be bound or free, and how some are roots and some are affixes. We've looked at how words fall into two basic classes, content words and function words. We have closely investigated the internal structure of words and how they are built, particularly through derivational affixation. We have discussed how words express inflection through affixation, vowel mutation, suppletion, and even through their order in the sentence, and we've seen how morphology provides clues about a word's syntactic category as a noun, verb, adjective, and so on. We've seen that although not all of us share the same knowledge of morphology and etymology, we nevertheless all use morphological rules to break words into their component parts, and that each of us has a rich and complex store of words in our mental lexicons. All of these investigations have helped demonstrate the complexity of the morphological system of English as well as the enormous amount of unconscious knowledge we all have about words and their parts.

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## Review, Practice, and Explore

### RPE 5.1 OK, Break It Up!

Divide the following words into morphemes. If there are any you are not sure about—that you believe could be divided in more than one way—describe what is problematic and discuss any other issues that arise.

treehouses	equipment	massage
cabinets	freakishness	communism
shipment	turnip	nevertheless
gracious	begs	heated

Are any of these words monomorphemic? Give an example of how one of these words illustrates the difference between morphemes and syllables.

### RPE 5.2 Finding Function Words

Find at least six (different) function words in the following text excerpt. Label each word's syntactic category. Also list and label at least six different content words. What kind of information is lost when function words are omitted?

Bilbo was very rich and very peculiar, and had been the wonder of the Shire for sixty years, ever since his remarkable disappearance and unexpected

return. The riches he had brought back from his travels had now become a local legend, and it was popularly believed, whatever the old folk might say, that the Hill at Bag End was full of tunnels stuffed with treasure. (from *The Fellowship of the Ring* by J. R. R. Tolkien)

### RPE 5.3 What's Missing?

Find an example of a text that omits function words (the classified advertising section of any newspaper is a good place to look, and newspaper and magazine headlines provide good examples). Identify the syntactic category of each content word in your example, and list the function words that are missing. What effect does the lack of function words have on your understanding of the piece overall?

### RPE 5.4 Free and Bound Morphemes

Divide the following words into morphemes. Which morphemes are affixes? Which morphemes are free morphemes, and which are bound?

legalize prescription distaste sportsmanship serenity ridden misinformation

### RPE 5.5 A Wieldy Task

Analyze the morphology of the following text excerpt, in which the author plays with morphological rules for comic effect. Using the terminology and concepts discussed in the chapter, explain each example of wordplay as explicitly as you can. Do you find any “cranberry” (bound root) morphemes?

It had been a rough day, so when I walked into the party I was very chaland, despite my efforts to appear grunted and consolate. I was furling my wieldy umbrella for the coat check when I saw her standing alone in a corner. She was a descript person, a woman in a state of total array. Her hair was kempt, her clothing shevelled, and she moved in a gainly way. I wanted desperately to meet her, but I knew I'd have to make bones about it since I was travelling cognito. Beknownst to me, the hostess, whom I could see both hide and hair of, was very proper, so it would be skin off my nose if anything bad happened. And even though I had only swerving loyalty to her, my manners couldn't be peccable. Only toward and heard-of behavior would do. (from “How I Met My Wife” by Jack Winter, *The New Yorker*, July 25, 1994.)

### RPE 5.6 Derivational Affixation

See if you can come up with at least two other words for each of the following suffixes. Label the syntactic category of the words or roots to which each suffix attaches, and label the category of the word created by affixation. (Ignore spelling differences—they don't affect the outcome.) Here's an example:

Word	Root/Word	+ Suffix	= Word
serenity:	serene	+ ity	= serenity
	adjective	+ ity	= noun

Do the same for the following; find words to which the following affixes are attached, and determine how affixation changes the syntactic category (the part of speech) of the word:

- ence/-ance (as in *avoidance*)
- en (as in *weaken*)
- ify (as in *simplify*)
- ness (as in *senseless*)

### RPE 5.7 It's Greek (or Latin?) to Me!

Recall that many words in English have Greek and Latin roots and affixes and that we use these parts of words productively to form new words. For example, the prefix *neo-* 'new' can be affixed to *conservative* to derive *neoconservative*. Some words with Latin and Greek affixes are the following:

#### Latinate suffixes

excite-ment, pens-ive, ecst-at-ic, appear-ance, peer-age, pleas-ure, leg-al, real-ize, read-able, seren-ity

#### Latinate prefixes

co-edit, de-frost, dis-belief, inter-national, non-skid, post-mortem, pre-cede, re-build, transmit, audio-phile, bi-lateral, circum-navigate

#### Greek suffixes

neur-algia, morpho-logy, micro-scope, colos-tomy, an-emia, the-ism, conform-ist, di-graph, kilo-gram, pan-demic, homo-phobe, franco-phone, kilo-meter, aero-gram

#### Greek prefixes

a-moral, anti-war, auto-mobile, bio-sphere, geo-graphy, hyper-ventilate, mono-chrome, neo-logism, thermo-meter, macro-biotic, acro-bat, techno-cratic

- A. Using these examples as well as a good dictionary, list at least five words (not on this list) currently used in English that have Greek or Latin affixes. Choose examples of words that are probably recent additions to the language (like *neoconservative*).
- B. Create five words using Latin and Greek morphemes. Give each word a meaning consistent with its affix (if you choose *neo-*, for example, your words would include the meaning 'new', as in *neolinguologist*).

### RPE 5.8 Word Trees

- A. Draw trees for the following words, indicating the category of word at the top of the tree.  
friendship      quickly      grievance      copilot
- B. Now draw these more difficult word trees, showing the order in which each morpheme attaches.  
reorganization      understatement      degradable      nonbeliever      deployment

**RPE 5.9** Word Trees and Meaning

- A. *Remarkable* is ambiguous, meaning either ‘notable’ or ‘able to be marked on again’. (One meaning is more common, but the other is possible nonetheless.) Draw tree structures illustrating these two meanings.
- B. *Inflammable* is a word that has come to have two opposite meanings. The traditional meaning is ‘able to catch on fire easily’, while the more recent meaning is ‘not flammable’. Draw tree diagrams that show the two possible meanings, and provide a brief discussion of what you have illustrated.
- C. Draw the two word trees that represent the two distinct meanings of the noun phrase *toy car crusher*. Label each with an appropriate paraphrase of the meaning.

**RPE 5.10** Derivation or Inflection?

Label the following prefixes and suffixes as derivational or inflectional.

autumnal	gestation	automated	faster	fastener
freaks	decompose	skipping	noncompliant	

**RPE 5.11** Derivation and Inflection in Latin

Does the following data from Latin with rough English translations show that Latin marks case and number on its nouns? Are these examples of inflection or derivation?

vir	man	vir-i	men
vir-i	of man	vir-orum	of men
vir-o	to man	vis-is	to men

**RPE 5.12** Mine, Yours, and Thine

Possessive pronouns—*mine*, *yours*—vary among dialects of English and have been in flux for hundreds of years. The standard pattern is given in (a).

- a. mine                      ours  
       yours                    yours  
       his/hers/its            theirs

Some dialects, especially in Appalachian English and some Southern dialects, have the following pattern.

- b. mine                      ourn  
       yourn                    yourn  
       hisn/hern/its            theirn

Describe the pattern that the pronouns take in this dialect and why. Also consider the archaic form *thine*. Where does it fit into the paradigm?



**RPE 5.13** Masculine, Feminine, Neuter?

Conduct some research on Spanish, Welsh, Arabic, Tuvalu, and Russian, all of which mark grammatical gender in some ways. Show examples of gender marking in each language, and briefly explain how gender is indicated and how it contrasts among the different forms (masculine, feminine, and/or neuter).

**RPE 5.14** Where Have All the Strong Verbs Gone?

The following list of words used to be strong verbs and are now weak verbs. Look them up in the *Oxford English Dictionary* or another good etymological dictionary and give the older, strong form of each verb. Do any of these verbs have different forms in different dialects? Are strong forms maintained?

bow, brew, burn, climb, help, mourn, row, step, walk

**RPE 5.15** Been There. Done That.

- A. Table 5.5 shows the five forms of an English verb. Using that table as a guide, label the form of each boldface verb in the following sentences. Another helpful resource is Table 5.6, which lists the different forms of the verb *be*.
  1. Ferdinand has been **eating** dandelions.
  2. Bees **are** buzzing around the flowers.
  3. Have you **seen** the movie?
  4. Lee **loves** chocolate.
  5. I **want** to go home.
  6. She hopes **to see** the movie tomorrow.
  7. Elisabeth **lives** in Chicago.
  8. They **have** been planning a trip.
  9. Joseph **had** a dog named Bones.
  10. Ferdinand has **been** stung by a bee.
- B. Construct seven sentences that include (at least) one verb in the form specified for each sentence. Label the verb forms.
  1. infinitive
  2. past participle
  3. present participle
  4. past tense
  5. present tense
  6. present tense, past participle
  7. past tense, present participle

**RPE 5.16** Be in Other Languages

Look up the word for *be* in at least two languages, and provide the verb's complete present-tense conjugation—all the forms of the verb for each person and number. Do these forms follow a

regular pattern, or are they irregular compared to the way that other verbs are conjugated in the language? If they are irregular, discuss why you think this might be.

**RPE 5.17*****Be* in Spanish**

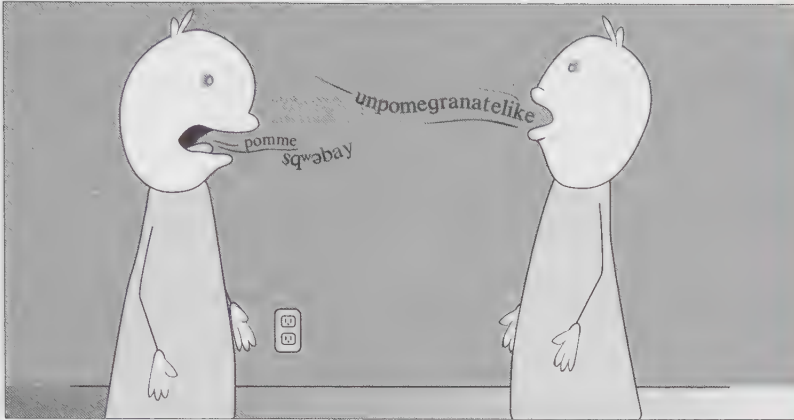
If you have studied or are a speaker of Spanish, you are aware that there are two forms of the verb *be* in Spanish – and if you are not a speaker of Spanish, you can learn about these two verbs now! In Spanish, a different verb is used to express *to be* depending on whether the speaker is addressing a condition or an essential quality, illustrated, for example, as follows.

La manzana *está* verde. ‘The apple is green.’ (condition)

La manzana *es* verde. ‘The apple is green.’ (quality)

Come up with some other examples which use a form of *be* in English, and determine which verb would be used in Spanish. You should consult a speaker of Spanish or conduct some research to validate your answers.





## Chapter at a Glance

# Morphological Typology and Word Formation

## Key Concepts

- Languages can be classified by morphological type as analytic or synthetic or on a continuum somewhere between these two types.
- English is mostly analytic but has some synthetic properties.
- We create new English words in a wide variety of ways.
- Through word formation processes, we are able to continually and creatively add words and alter the meanings and structures of existing ones.
- Word formation processes clearly illustrate our enormous capacity for creativity in language and that language is a dynamic, ever-changing system.

## Did You Know . . . ?

Solid Roundish Objects and Mushy Matter  
The Truth about *Truthiness*

*Language Alive!* Blimey!  
Ms.

*Linguistics in the News* F\*\*\*ing Brilliant! FCC Rulings on Profanity

*Accent on* Lexicographers

## Morphological Typology

Synthetic Languages

Analytic Languages

Mixed Typological Systems

## The Morphology of Other Languages

## Word Formation Processes

Slang versus New Words

Recent New Words

Coining

Compounding

Eponyms

Retronyms

Blends

Conversions

Acronyms

Clipping

Backformation

Reinvention

## Summary

## Sources and Resources

## Review, Practice, and Explore



*Damn words; they're just the pots and pans of life, the pails and scrub brushes.*

—EDITH WHARTON, 1932

In this chapter, we look at the inflectional morphology of other languages and show how languages fall into morphological classes, or typologies, with respect to the patterns of their affixes and word order. Although languages vary quite a bit in the way they express grammatical information, we find that some general properties of grammatical structure are at work in all languages, which provides further evidence for Universal Grammar.

We then turn to how we form words in ways other than affixation, through a variety of processes that give us such words as *blog*, *NASA*, *flip-flopper*, *schnoodle*, and *popemobile*. Languages have wonderful, built-in ways of creating new words. We make new words when we have a new concept, thing, or action that needs a label, when we give a new name to an existing thing (for political, social, ironic, or comic reasons), or when we just play with the language. To create words, regardless of why we do so, we exhibit our unconscious knowledge of the inner workings of our language. We know how to manipulate morphemes because we all have a great deal of knowledge of the meaningful units of our various languages.

## Morphological Typology

We have already seen some of the ways morphological systems differ across languages. For example, in English we indicate that something will happen in the future by a modal verb and the infinitival form of the verb:

I speak. I will speak.  
(modal) (infinitive)

Spanish indicates the future by modifying the inflectional affixes within the verb.

Hablo            I speak.  
Hablaré        I will speak.

In this section, we examine some of the various ways languages combine morphemes and how languages fall into **morphological typologies** based on their common morphological structures. We detail these language types and consider some examples of each.

We have seen that English uses a variety of morphological strategies to express grammatical tense, aspect, plurality, possession, comparative and

**morphological typology** classification of languages according to common morphological structures

superlative degrees, and other relationships. To express these relationships, English uses inflectional affixation (*cats*, *freezing*, *biggest*), as well as vowel mutation (*foot/feet*, *run/ran*) and suppletion (*go/went*, *good/better*), to show inflection on verbs, nouns, and adjectives. We have also seen that, relatively speaking, English expresses far fewer such grammatical relationships than many other languages do. For instance, as we learned in the previous chapter, pronouns in English express some case relationships, but other nouns do not express case morphologically except in the genitive, or possessive, case (*manatee's flipper*). Rather, English relies on word order to express case relationships (e.g., subject, direct object, and indirect object) and grammatical functions. English thus has what we call a mixed system: some grammatical relationships are expressed morphologically and some by word order.

Languages that express grammatical relationships morphologically are called **synthetic languages**. These languages' words are more complex, made up of content root morphemes with one or more affixes. Most European languages are synthetic and have both prefixes and suffixes. English, though it has some synthetic features, is more of an **analytic language**. In analytic languages, words tend to consist of free morphemes with very few affixes. We learn more about these two language types in the following sections.

## Synthetic Languages

Synthetic languages form words by affixing morphemes to a root morpheme. Word order is less important in these languages because the affixes, rather than the position of the words in the sentence, indicate grammatical relationships.

Synthetic languages are typically further broken down into two subtypes: *agglutinative* and *fusional*. **Agglutinative languages** can have several morphemes that attach to a root morpheme, and each morpheme has only one meaning that is clearly distinct. Some agglutinative languages are Turkish, Swahili, Salish languages, Nahuatl, and Japanese, among many others. Here are examples of a Lushootseed (Salish) sentence and one from Swahili. Notice the many morphemes within the verb and that each has a unique meaning (illustrated by the hyphens separating the distinct morphemes):

sq <sup>w</sup> əbay?	tiʔə?	sug <sup>w</sup> əčəb
sq <sup>w</sup> əbay?	tiʔə?	s-u-g <sup>w</sup> əč- əb
dog	determiner	NOUN PREFIX-PUNCTUAL-look for- MIDDLE-3rd person object

'The one he is looking for is the dog.' (Hess, personal communication)

Hawàtasóma kitabu

Ha-wà-ta-sóma kitabu

negative-3rd person plural-FUTURE-read book

'They will not read the book.'

**synthetic language**  
language in which  
syntactic relations  
are expressed  
by inflectional  
morphemes rather  
than by word order

**analytic language**  
language in which  
syntactic relations  
are expressed  
primarily by word  
order rather than  
by inflectional  
morphemes  
attached to words

**agglutinative  
language** language  
whose words have  
several morphemes  
that attach to a root  
morpheme, and  
each morpheme has  
only one distinct  
meaning

## hwaet!

With more than 100,000 native speakers, Navajo has more speakers than any other Native North American language. This number has actually increased with time as language revitalization programs have gone into effect.

Another interesting fact about Swahili is that all noun roots are bound morphemes, so in the preceding example the root *-tabu* ‘book’ cannot stand alone and must have a prefix that marks the word class it belongs to. There is one prefix for trees, plants, and nature; another for names of humans; another for names of animals, and so on. (There are about thirteen classes.)

Another example of agglutinative languages are the Athabaskan languages spoken from Alaska through western Canada and all the way down to the American Southwest (thus including Navajo); they have about twenty different affixes that can attach to the verb root and that indicate grammatical functions and relationships (e.g., subject, object, and indirect object) or other grammatical information (e.g., tense, aspectual categories, and negation). (We discuss noun classes again in Chapter 10, on semantics.) Here is a sentence from the southern Alaskan language Ahtna, also called Tanaina:

Ts’anhdghulayał hyegh nuqulnix htsast’a.

Ts’anhdghulayał	qey-egh	nu-qe-ghe-l-nix	qe-tsas-t’a
name	him-about	ITERATIVE-it-PREFIX- CLASSIFIER-tell.stories	it-about-be

‘A long time ago they used to tell stories about Ts’anhdghulayał.’

(Mithun 1999: 366)

It is not important for our purposes here that you know all of the terms used to describe the prefixes but rather that you see that the morphological system is quite complex, with most words containing many meaningful parts.

Such highly agglutinative languages, languages with a high number of morphemes per word, are also called **polysynthetic languages**. In addition to the Athabaskan languages, many other native North American languages are polysynthetic languages, as are many Australian languages. Here is another example, this one a single word from Yup’ik, a member of the Eskimo-Aleut language family, whose many languages are spoken in Siberia, Greenland, Alaska, and northeastern Canada.

kaipiallrulliniuk

kaig-piar-llru-llini-u-k

be.hungry-really-PAST-apparently-INDICATIVE-they.two

‘The two of them were apparently really hungry.’

(Mithun 1999: 38)

When we see a language that forms its words this way, the question once again arises, What is a word, and how can we distinguish a word from a sentence in such languages? Since this single word in Yup’ik conveys the same information that would be expressed in a whole sentence in English, how do we know that this is, in fact, a word in Yup’ik? Our intuitions tell

**polysynthetic language** language with a high number of morphemes per word

us a lot about whether something is a word in our own language, so native speaker judgments are the best way to determine whether clusters of morphemes are recognized as single words. This is true also in languages that are not written; speakers or signers of the language have intuitions about what constitutes a word, and the concept of *word* does seem to be psychologically real. Although speakers and signers do not pause between words, they can do so, indicating their awareness of word boundaries. This same awareness holds in polysynthetic languages in which the words are quite morphologically complex. Mithun (1999) points out, too, that speakers are not typically consciously aware of the meanings of individual morphemes within words but do know the meanings of the whole words, again giving evidence for the concept *word* (p. 38). And in many languages, stress patterns correlate with the concept of *word*; there is only one primary stress per word.

Consider that we recognize a word like *unconstitutionality* in English as a single word, even though we can divide it into its meaningful parts. None of those other bound morphemes can stand alone; thus, the word is a single word made up of several meaningful morphemes:

un-constitu-tion-al-ity

(And maybe *con-* is an affix, too? It appears in words such as *constrain* and *conserve*, where it comes from the Latin prefix *com-* ‘together’. And it occurs in words such as *consternation*, where *con-* is a Latinate “intensive prefix.”)

**fusional language**  
language in which  
morphemes have  
more than one  
meaning fused into  
a single affix

Agglutinative languages contrast with **fusional languages**, in which the morphemes attached to the root may fuse more than one meaning into a single affix. Some fusional languages are Spanish, German, Russian, and Semitic languages such as Hebrew, among others. Consider from this German example how a determiner alone can carry much distinct meaning:

der Hund ‘the dog’

der = definite masculine nominative singular

Hund = dog singular

And here’s another example from Russian, showing the various forms of the root *stol-*, meaning ‘table’. In English, of course, the forms are the same, except for the genitive, to which *-s* is added.

	Singular	Plural	English examples of cases
<b>Nominative</b>	stol	stol-y	<u>The table</u> is wooden (‘table’ is the subject)
<b>Accusative</b>	stol	stol-y	She saw <u>the table</u> (‘table’ is the direct object)
<b>Genitive</b>	stol-a	stol-ov	The <u>table’s</u> legs (‘table’ is a possessive)
<b>Dative</b>	stol-u	stol-am	She gave <u>the table</u> new paint. (‘table’ is the indirect object)

The *-a* on *stola* indicates both singular and genitive. Similarly, the *-am* on *stolam* means dative and plural.



## Did You Know...?



## Solid Roundish Objects and Mushy Matter

In Navajo, distinct verb stems classify an object by its shape or other physical characteristics and also describe the movement or state of the object. The eleven “handling” verb stems are the following:

Classifier + Stem	Explanation	Examples
-’á	solid roundish object	bottle, ball, boot, box
-yí	load, pack, burden	backpack, bundle, sack, saddle
-jool	noncompact matter	bunch of hair or grass, cloud, fog
-lá	slender flexible object	rope, mittens, socks, pile of fried onions
-tí’	slender stiff object	arrow, bracelet, skillet, saw
-tsooz	flat flexible object	blanket, coat, sack of groceries
-tíéé’	mushy matter	ice cream, mud, slumped-over drunk person
-nil	plural objects 1	eggs, balls, animals, coins
-jaa’	plural objects 2	marbles, seeds, sugar, bugs
-ká	open container	glass of milk, spoonful of food, handful of flour
-t’í	animate object	microbe, person, corpse, doll

(Young 2000: 3–7)

So, for example, Navajo does not have a single verb that corresponds to an English word like *give*. To say the equivalent of “Give me some hay,” the Navajo verb *nííjool* (noncompact matter) must be used; for “Give me a cigarette,” the verb *nííjìh* (slender stiff object) must be used. The English verb *give* is expressed by eleven verbs in Navajo, depending on the characteristics of the object. In addition to defining the physical properties of the object, Navajo verb stems can distinguish the manner of the object’s movement. There are three manners of movement, described as *handling*, which include actions like carrying, lowering, and taking; *propelling*, which includes tossing, throwing, and dropping; and *free flight*, which includes falling and flying through space. For example, using a solid-roundish-object stem, the -’á affix means ‘to handle (a round object)’, -ne’ means ‘to throw (a round object)’, and -ts’id means ‘(a round object) moves independently’, as these words and their translations illustrate:

tsits’aa’náá’á	‘I lowered the box down’
tsits’aa’náá’ne’	‘I tossed the box down’
tsits’aa’náá’ts’id	‘the box fell’

(Young 2000: 2)

For more information

Young, R. 2000. *The Navajo verb system: An overview*. Albuquerque: University of New Mexico Press.

## Analytic Languages

In an analytic language, grammatical information is conveyed by word order and particles rather than by inflectional morphemes. In the analytic language—Vietnamese, for example—the form of the verb is the same regardless of the subject of the verb, and no tense or other agreement marking is expressed on the verb. Consider the verb *ăn*, meaning ‘eat’ in the following paradigm:

tôi <u>ăn</u>	I eat	chúng tôi <u>ăn</u>	we eat
anh <u>ăn</u>	you eat	các anh <u>ăn</u>	you (pl.) eat
anh â’y <u>ăn</u>	he eats	ho <u>ăn</u>	they eat
chị â’y <u>ăn</u>	she eats		
nó <u>ăn</u>	it eats		

As you can see, the verb *ăn* always has the same form.

As analytic languages have very few derivational or inflectional affixes, they often form words by combining free morphemes into compound words:

life  
guard  
lifeguard  
lifeguard chair  
lifeguard chair tan (you know, a tan someone might get sitting on a lifeguard chair)

Chinese, a largely analytic language, also has a great many compounds. (Although Chinese is a tone language, as discussed in Chapter 3, the tones are not indicated on the words shown here.)

dit ban  
grand board  
‘floor’

lu kou  
road mouth  
‘intersection’

And this one is a bit more metaphorical:

ming bai  
bright white  
‘to understand’

RPE 6.1

## Mixed Typological Systems

Although some languages fall into a clearly analytic or clearly synthetic system, many, like English, are mixed systems. Let’s look first at the ways in which English is synthetic. English expresses plurality by the morpheme *-s* and past tense by the morpheme *-ed* and is thus synthetic in this regard. Vowel mutation used to express tense or aspect, as in English strong verbs, is also a property of synthetic languages. English relies on word order rather than

morphology, however, to express future tense. In English, this tense is formed by the addition of *will*, *going to*, or sometimes *shall* to the verb phrase (*will visit*, *going to visit*, *shall visit*). To express negation, the morpheme *not* is added to the sentence, changing the positive sentence *The student is learning Old English* into the negated version, *The student is **not** learning Old English*. Future tense and negation are both examples of how grammatical relationships can be expressed by separate words and word order rather than morphologically on the verb, as it is in many synthetic languages. In this way, English is an analytic language.

Prepositions are words that express a grammatical relationship (of location, direction, etc.) that applies to a noun. A language with prepositions as separate words, such as English, is analytic in this regard. In many languages, however, prepositions show up as inflections on nouns, so they are not separate words but affixes. Old English had both types: prepositions as separate words and prepositions that were attached to other words; therefore, Old English had both analytic and synthetic properties.

### Synthetic preposition

bæt entas woldon aræran ane burh  
that giants would up-raise a city  
'that giants would raise up a city'

(*Anglo-Saxon Chronicle* 22.318.14)

### Analytic preposition

pæs cyninges þegnas þe him beæftan wærun  
the kings thegns who him behind were  
'the king's thegns (servants) who were behind him'

(*Cynewulf and Cyneheard*)

Incidentally, in Old English, prepositions usually preceded their objects when the object was a noun, but they usually followed the object when the object was a pronoun, as shown in the preceding example.

The history of the English language offers an excellent illustration of a shift from a highly synthetic language, Old English, to a largely analytic one, Present-Day English. As you can see by the examples in the previous chapter that illustrate the inflectional morphology of nouns, verbs, and adjectives in Old English, the language was primarily synthetic, even though it had certain analytic relationships as well (as illustrated by the mixed use of prepositions as separate words and as inflections). These inflectional affixes largely disappeared in the Middle English period (1100–1400 CE), and nouns, verbs, and adjectives became, in general, largely uninflected. The shift from a synthetic to an analytic language had the consequence of triggering a shift in word order; in Old English, word order was much freer (though not entirely without constraints), but in Middle English, word order became fairly rigid, as Subject–Verb–Object. Word order became crucial in order to interpret grammatical relationships that had been indicated by inflectional morphology.

Many other languages also exhibit mixed morphological systems. Though Chinese is usually given as an example of an analytic language, it does have some bound morphemes. And Japanese has a high degree of inflectional marking on verbs, so it is synthetic in that respect, but it has almost no affixes on nouns, so it is analytic in that respect.

## RPE 6.2

# The Morphology of Other Languages

Through a method of comparing and contrasting, you can discover a great deal about the morphology of languages you are not familiar with. Data organized in this way is called a *paradigm*. Paradigms are useful in working out the morphology of a language; they let you compare words that have different inflections so you can tell what the root is and what the affixes are. Consider the following data from Spanish:

amigo	'male friend'	perro	'male dog'
amiga	'female friend'	perra	'female dog'
amigos	'male friends'	perros	'male dogs'
amigas	'female friends'	perras	'female dogs'

From this data, you can see that the root *amig-* appears every time we have 'friend' in the translation, and the root *perr-* appears every time we have 'dog' in the translation. Thus, *amig-* and *perr-* must mean 'friend' and 'dog', respectively. Also, the suffix *-o* appears every time we have 'male' in the English translation, and *-a* appears when we have 'female'. Thus, *-o* and *-a* must mean masculine and feminine gender, respectively.

And consider the following words from Classical Greek and their English translations. (Recall that : after a vowel indicates a long vowel.)

grapho:	'I write'	uo:	'I lose'
grapheis	'you (sg.) write'	ueis	'you (sg.) lose'
graphei	'he/she/it writes'	uei	'he/she/it loses'
grapho:men	'we write'	uo:men	'we lose'
graphe:te	'you (pl.) write'	ue:te	'you (pl.) lose'
graphousi	'they write'	uousi	'they lose'

## RPE 6.3

By simply comparing and contrasting, you can determine the roots of the Classical Greek verbs 'write' and 'lose' and the morphemes that correspond to the various pronominal agreement forms.

## RPE 6.4

# Word Formation Processes

The previous sections show some of the ways in which other languages build words. And in the previous chapter, we saw some of the many ways in which we create new words in English through derivational affixation. Derivational



affixation is not our only option for creating new words, however. In these next sections, we will discuss a number of additional ways in which new words are formed and in which existing words take on new meanings.

We don't have to look very far to find examples of new words coming into the language—as completely new words, as old words that had fallen out of use and come back into the language, or as new words created from parts of existing words. New words come into languages all the time. Most will stick around, and others will cease to be used because they are no longer necessary (due to an obsolete item or a passing fad). Some remain slang, their use restricted to a particular group.

## Slang versus New Words

**slang** an informal word or expression that has not gained complete acceptability and is used by a particular group

Let's explore the concept of slang in a bit more depth. **Slang** words or phrases are typically very informal, and they are usually restricted to a particular group—typically teens and young adults—as a marker of in-group status. Most are not new words but existing words that have acquired new meanings for some group. Slang is also characterized by having a fairly short life; most slang words do not last more than a generation. And those that do stick around soon cease to be slang; some former slang words include *dwindle*, *mob*, *hubbub*, and *rowdy*. There are a few exceptions: words that still are informal and colorful but are used by multiple groups and generations. *Cool* is one. Can you think of other words that still seem to be slang but are used by, say, you and your parents and maybe even your grandparents? While particular slang terms are sometimes viewed unfavorably by those who do not use them, slang is a feature of most languages and is an indicator of the ways in which language adapts for the purposes of those who use it. As Gilbert Keith Chesterton wrote way back in 1902, “The one stream of poetry which is continually flowing is slang.”

**jargon** specialized vocabulary associated with a trade or profession, sport, game, etc.

Slang can be distinguished from **jargon**. Jargon is also words or phrases used by a particular group, but jargon is not as informal; rather, it is associated with particular professions, trades, sports, occupations, games, and so on. We have used lots of linguistics jargon in this book so far: *phoneme*, *diphthong*, *allophone*, *morpheme*, *bilabial*. Snowboarders have their own jargon: *air*, *carving*, *fakie*, *grind*, *jibbing*, *half-pipe*. (Look 'em up or ask a boarder!)

**dialect** variety of a language that has unique phonetics, phonology, morphology, syntax, and vocabulary

Slang is not the same as a **dialect**. Dialects have their own unique phonetics, phonology, morphology, syntax, and vocabulary. The same slang terms may be shared across dialects, and dialects are not short-lived like slang terms.

**register** manner of speaking that depends on audience (e.g., formal versus informal)

Slang should also not be confused with style or **register**. We all have different ways of speaking formally and informally, though these styles can vary a great deal across speech groups. We shift registers easily and unconsciously from a job interview to a conversation with close friends, using different vocabulary, more or less prescriptively correct forms, and even different intonation.

LINGUISTICS  
IN THE NEWS

## F\*\*\*ing Brilliant! FCC Rulings on Profanity

What exactly is profanity? What do we mean when we call something profane, indecent, or obscene? The Federal Communications Commission (FCC), a U.S. government agency established by the Communications Act of 1934, is charged with regulating interstate and international communications by radio, television, wire, satellite, and cable, including material that is "obscene," "indecent," or "profane." Recent court cases demonstrate that determining what constitutes obscenity and profanity is not an easy matter.

The FCC website provides the following information: "Obscene speech is not protected by the First Amendment and broadcasters are prohibited, by statute and regulation, from airing obscene programming at any time. According to the U.S. Supreme Court, to be obscene, material must meet a three-prong test: (1) an average person, applying contemporary community standards, must find that the material, as a whole, appeals to the prurient interest (i.e., material having a tendency to excite lustful thoughts); (2) the material must depict or describe, in a patently offensive way, sexual conduct specifically defined by applicable law; and (3) the material, taken as a whole, must lack serious literary, artistic, political, or scientific value. The Supreme Court has indicated that this test is designed to cover hard-core pornography." And the FCC's

definition of profanity: "Profane language" includes those words that are so highly offensive that their mere utterance in the context presented may, in legal terms, amount to a "nuisance."

Not only is it difficult to define obscene and profane language, but the definitions themselves depend on possibly subjective notions of "prurient interest" and material that "lacks serious literary, artistic, political or scientific value," and so on.

In NBC's 2003 broadcast of the Golden Globe Awards show, the lead singer of U2, Bono, uttered the phrase *fucking brilliant*. In October 2004, the FCC ruled that the use of the word *fucking* as an adjective in this context was not indecent. The decision ruled that the broadcast had not violated the indecency prohibition, because Bono's use of the "f-word" had been "fleeting" and "in a nonsexual context." However, the FCC later overruled its own Enforcement Bureau's decision and put a new policy into place, the Golden Globe Awards Order, which warns broadcasters that "depending on context, it would consider the 'f-word' and those words (or variants thereof) that are as highly offensive as the f-word to be 'profane language' that cannot be broadcast between 6 A.M. and 10 P.M." It also concluded that other cases holding that isolated or fleeting use of the f-word are not indecent are no longer good law. The commission further concluded that use of the f-word in the

context of the Golden Globe Awards was profane under 18 U.S.C. Section 1464.

Though no fines were issued for this incident—or for another involving Nicole Richie (who uttered the f-word during the Billboard Music Awards)—the FCC says that it will issue fines for future violations. Broadcasting companies FOX, ABC, NBC, and CBS challenged the new policy in an attempt to clarify the order to make sure they do not violate the rules.

In July 2010, the 2nd U.S. Circuit Court of Appeals ruled that the FCC's policy banning even a single "patently offensive" expletive and other profanity on television and radio violates the First Amendment. The three-judge panel said the FCC "will have to go back to the drawing board" if it wants a profanity policy that will survive scrutiny since the current policy is "unconstitutionally vague" and creates a "chilling effect that goes far beyond the fleeting expletives at issue here." (Hamblett 2010)

For more information

<http://www.fcc.gov/eb/oip/welcome/>

<http://www.cbsnews.com/stories/2004/02/25/tech/main602251.shtml>

<http://www.cnn.com/2003/LAW/12/23/findlaw.analysis.hilden.indecency/>

Hamblett, Mark, "2nd Circuit Strikes FCC Profanity Ban as Vague, Overly Broad," *New York Law Journal*, July 14, 2010, <http://www.law.com/jsp/article.jsp?id=1202463506252>

**taboo word** forbidden word or expression interpreted as insulting, vulgar, or rude in a particular language

And finally, slang should be distinguished from **taboo** words. Most (if not all) languages have taboo words, and they typically refer to things that are forbidden or unmentionable in the culture. Many languages have taboo words that refer to sex and excrement, for example. It also considered taboo or blasphemous (from the Greek word *blasphemia*, meaning ‘profane speech, slander’) to use words affiliated with religion or religious figures in a way that is offensive or shows lack of respect. It’s interesting that the substitutes for the taboo words, which may have exactly the same meaning and are clearly a substitute, do not carry the same power as the taboo words themselves. Consider *shoot* for *shit*, *darn* for *damn*, *heck* for *hell*. Taboo words are also distinct from slang words because they have staying power; many of our taboo words have been around, with approximately the same meanings, for hundreds and hundreds of years.

**RPE 6.5**

## Recent New Words

Now let’s consider new words that have recently come into the language. Some may be slang, but others may become more permanent additions to the language.

Every year, the American Dialect Society (ADS), a professional group of linguists, holds an annual Word of the Year competition, which showcases new words. The ADS notes that the words do not have to be “brand new” but must be newly prominent or notable, much like *Time* magazine’s Person of the Year. The Word of the Year is announced in January at the annual ADS meeting and posted on the ADS website, and even hits the front page of most newspapers (<http://www.americandialect.org/>).

**ADS Word of the Year for 2010** *app*: (noun) an abbreviated form of *application*, a software program for a computer or phone operating system

**ADS Word of the Year for 2009** *tweet*: (noun) a short message sent via the Twitter.com service, and (verb), the act of sending such a message

**ADS Word of the Year for 2008** *bailout*: the rescue by the government of companies on the brink of failure, including large players in the banking industry.

Another “word watcher” website is Word Spy, “dedicated to recently coined words and existing words revived into modern usage” (<http://www.wordspy.com/>). Here are a few of Word Spy’s recent additions.

- **trypophobia** *n.* (2010) – An unusually strong fear of, or aversion to, holes, particularly tiny holes that appear clustered together
- **defriend** *v.* (2010) – To remove a person from one’s list of friends on a social networking site
- **lifestreaming** *n.* (2007)—an online record of a person’s daily activities, either via direct video feed or via aggregating the person’s online content such as blog posts, social network updates, and online photos. *lifestreamer n., lifestream v., n.*



- **gamification** *n.* (2011)—The use of game-related concepts in non-game websites and applications to encourage users to perform actions desired by the business. *gamify* *v.*

hwaet!

Visit the ADS website (<http://www.americandialect.org/>) to see which words were nominated for Word of the Year but didn't make it.

Other recent top words of the week, according to Word Spy: *rusticle*, *polyfidelity*, *muncide*, *phishing*, *metrosexual*, *earworm*, and *spim*.

As you can see by examining the examples of new words from the American Dialect Society and Word Spy lists, we make great use of existing roots, stems, and affixes to create new words. For example, *metrosexual* is a combination of the Greek morpheme *metro* and the adjective *sexual*, following the same pattern as *homosexual* and *heterosexual*, which is also evident in the more recent *retrosexual* and *pomosexual*. The word *mash-up* follows a common pattern of making nouns of verb + particle (phrasal verb) constructions. Verb + particle constructions follow a particular syntactic pattern, as the following examples illustrate.

- The teacher handed out the papers.
- The teacher handed the papers out. Noun: *handout*

### Did You Know...?



#### The Truth about *Truthiness*

The press likes to get in on the American Dialect Society's pick for Word of the Year. In a story about the 2005 winner, *truthiness*, a reporter neglected to mention that the term was made popular by Stephen Colbert of *The Colbert Report*, a TV show on Comedy Central. It was Colbert's sense of the word that caused it to be Word of the Year. Colbert explained, "We're not talking about truth, we're talking about something that seems like truth—the truth we want to exist" (Sternbergh 2006). Right after the American Dialect Society's selection of the word, the reporter interviewed a linguist who must not have known about the Colbert source, so he cited an older definition of *truthiness* from the Oxford English Dictionary; its use was rare even in the 1800s, when it was cited as a derivation of *truthy*. The word's oddity as a noun is due to the fact that because there is already a noun, *truth*, we do not expect another noun form, *truthiness*, to have the same meaning. But in fact, it doesn't have the same meaning as *truth*, and isn't Colbert's intended meaning—something like truth but not truth—appropriate in today's political context?

The term made a comeback in 2010 when it was used frequently during the campaign leading up to Jon Stewart and Stephen Colbert's "Rally to Restore Sanity and/or Fear," also dubbed the "Restore Truthiness" rally, held in Washington, DC.

*For more information*

Sternbergh, A. 2006. Stephen Colbert has America by the ballots. *New York Magazine*, October 16.



- a. The farmer shooed in the cows.
- b. The farmer shooed the cows in. Noun: *shoo-in*

In the (a) sentences, nothing comes between the verb (*hand*, *shoo*) and following the particle (*out*, *in*). In the (b) sentences, on the other hand, the particle appears to the right of the direct object (*the papers*, *the cows*). Syntactic details aside, verb + particle constructions are the source of nouns such as *handout*, *shoo-in*, *takeout*, *takeover*, *pickup*, and the recent additions *mash-up*, *meet-up*, and *drawdown*.

We will look in some detail at a few word formation processes, many of which illustrate our creativity with language, and also at the systematic nature of morphological rules.

## Coining

**coining**  
(**neologism**)  
recently created  
word; typically  
refers to a word  
not derived from  
existing words

**Coinings**, or **neologisms**, are words that have been recently created. They often apply to new inventions or concepts. The word *neologism* means ‘new word’ and was, in fact, itself a neologism around 1800. True coinings, which are completely new words, are rather rare relative to the vast number of words we create by means of the other word formation processes.

Shakespeare is often credited with coining many words, such as *sanctimonious*, *fashionable*, *bedazzle*, *pander*, and *unearthly*; however, notice that these coinings have recognizably English morphology, including the affixes *-ous*, *-ly*, *-able*, and *un-*. Often, words that are called coinings are really not; they are formed from existing morphemes by existing word formation processes. For example, *blog* is listed as a coining on the Word Spy website, and though it is certainly a new word, it is a blend of existing words: *web* and *log*. *Sniglets* are new words so dubbed by comedian Rich Hall; they are words that he would like to see in the dictionary that fill a gap—words for things we don’t have a word for. But even sniglets are usually formed by English word formation processes. His noun *backspackle*, for example, is a compound of *back* and *spackle*, meaning ‘the markings on the back of one’s shirt from riding a fenderless bicycle.’

True coinings include *googol* (invented by the then 9-year-old nephew of American mathematician Edward Kasner as the name for a very large number, ten to the power of one hundred) and *bling* (hip-hop slang for expensive or flashy jewelry). The British duo Douglas Adams and John Lloyd wrote *The Meaning of Liff*, a humorous dictionary of things there aren’t words for but should be. These are distinguished from sniglets because all the words listed come from place names (mostly from the United Kingdom); place names, they say, because they are seldom used and could be fine words for all those things we don’t have words for. Two examples are *oughterby*, which is defined as someone you don’t want to invite to a party but feel you should, and *nottage*, a word for the things you find a use for right after you have thrown them away.

## Compounding

**compounding**  
combining one or  
more words into a  
single word

One very common way to form new English words is by **compounding**. A compound is formed when two or more words behave as a single word. English speakers know, for example, that *black bird* in the sentence *I saw a black bird* differs from the meaning of *blackbird* in *I saw a blackbird*. In the first sentence, *black bird* means a bird that is black, a bird of any possible species. In the second sentence, *blackbird* refers to a particular species of bird. In the first sentence, the adjective *black* modifies the noun *bird*, and together *black bird* is a noun phrase (NP). In the second, *blackbird* is a noun, and more specifically a compound noun, as illustrated schematically below.

- a. [black] + [bird] adjective + noun
- b. [blackbird] compound noun

Compounds can be of any open-class category—noun, verb, adjective, or adverb. There also exist compound prepositions, and prepositions form the parts of compounds of other categories (for example, *outsource* is a preposition + verb compound of the category verb). Pronouns can also occur in compounds (*whoever*), as can quantifiers such as *some* or *every* (*someone*, *everything*), and there exist a number of historical examples of compound adverbs such as *herewith* and *thereupon*. Table 6.1 lists more compounds from all of the major parts of speech categories, illustrating the wide variety of types.

Notice that there is no consistent spelling or punctuation of compounds; they can occur with hyphens, as separate words, or spelled out as a single word. As discussed in Chapter 4, one way to recognize many compounds is by stress patterns; typically, compound stress falls on the first word in the compound, allowing us to distinguish compounds from phrases.

- a. black bírd, bláckbird
- b. green hóuse, gréenhouse

**Table 6.1** Common Compound Words by Type

Nouns	Adjectives	Verbs	Adverbs	Prepositions
blackbird	childlike	blackmail	downward	into
horsefly	ready-to-wear	overact	upward	onto
peanut butter	well-off	downsize	therefore	without
six-pack	upright	update	however	toward
daughter-in-law	single-minded	outsource	furthermore	within

This is not always the case; here are a few interesting exceptions and dialectal variations:

- a. upgrade, uplift
- b. ápple cake, apple píe
- c. íce cream, whipped créam

Compounds are typically affixed just as any other words, providing evidence that we do store them in our mental lexicons as single words; they can take plural *-s*, possessive *-’s*, past tense *-ed*, present participle *-ing*, and so on.

- a. blackbirds, six-packs, horseflies
- b. whitewashing, outsourcing, downsized

Often-cited exceptions to this generalization include *sister-in-law*, *attorney general*, *master-at-arms*, and *heir apparent*. These compounds are unusual for English because they are “head-first” compounds, with the modifier of the head (the adjective or the prepositional phrase) following the head (the noun). Compounds are pluralized in two ways. The plurals in group (a) are perhaps more prescriptively correct, though the plurals in group (b) also occur, particularly in oral language, and are perhaps more common.

- |                                   |                               |
|-----------------------------------|-------------------------------|
| a. three sisters <u>s</u> -in-law | b. three sister-in-laws       |
| six attorneys <u>s</u> general    | six attorney general <u>s</u> |
| two heirs <u>s</u> apparent       | two heir apparent <u>s</u>    |

*Attorney-general* is derived from French, where the adjective *general* follows the noun it modifies. English speakers, however, have English, not French, intuitions about morphological rules and thus treat *attorney general* just like *famous general*, where *famous* precedes *general* (not the other way around). The fact that both options for pluralization of such compounds exist can be accounted for by proposing that the group (b) plurals are “natural” and conform to speakers’ descriptive rules of English but that the group (a) pluralization is learned the same way as other prescriptive rules, or are at least consciously analyzed by the speaker.

The meaning of many compounds is fairly transparent; a *blackbird* is a type of bird, and a *supermom* is a type of mom. The meanings of other compounds are not so obvious, however. A *blockhead* is not someone whose head is shaped like a block, nor is to *backstab* someone to physically harm them with a sharp implement.

German, in particular, uses compounds as a way of forming new words, ending up with some impressively long ones:

- a. Donaudampfschiffahrtsgesellschaftskapitän  
     Donau - dampf - schiff - fahrt - gesellschaft - kapitän  
     Danube steam ship operate society captain  
     ‘captain of a boat belonging to the Danube Steamship Company’

## b. Ausländerbehördebürostunden

Aus - länder - behörde - büro - stunden  
 out country (pl.) officials office hours  
 'hours of the immigration office'

## c. Rehunterkieferbackenzahnteil

Reh - unter - kiefer - backen - zahn - teil  
 deer lower jaw cheek tooth section  
 'piece of the deer's lower jaw with the teeth intact' (in order to  
 tell the age of the animal)

RPE 6.6

**eponym** word that comes from the name of a person associated with it

hwæt!

Brand names are usually registered (like trademarks and copyrights) so that using them without the owner's permission is illegal—but you're not likely to get arrested for saying *Kleenex*.

RPE 6.7

**retronym** word that provides a new name for something to differentiate the original word from a more recent form or version

## Eponyms

Another way we create new words is by creating **eponyms**, or words from names of (usually) famous people, and the words' meanings relate to something specific about them or their experiences. Consider the Pythagorean theorem (a geometric equation named for the Greek mathematician Pythagoras), the system of Braille used for the blind (named for the Frenchman Louis Braille, who invented it), Morse code (a communication system invented by Samuel Morse for use with the telegraph), and hundreds more. Some examples of eponyms are obviously from names, even if we are not certain of their origins (Achilles' heel, Reyes syndrome, Orwellian), but others are less so; *algorithm*, *bloomers*, *gerrymander*, *leotard*, and *saxophone* are all words that come from names.

Eponyms also come from brand names. For example, many of us refer to tissues of any brand as *Kleenex*, an original facial tissue brand name, to any petroleum jelly as *Vaseline*, to all cotton swabs as *Q-tips*, and to all MP3 players as *iPods*. Some brand-name eponyms are recognizable, but many are so integrated into the language that we aren't aware they were ever brand names at all.

## Retronyms

Another type of word formation, called a **retronym** (a term first coined by journalist Frank Mankiewicz in 1980 and then popularized by *New York Times* columnist William Safire) provides a new name for something to differentiate the original word from a more recent form or version. The original word typically gains a modifier, rather than being completely replaced by a new word, to account for developments of the object or concept—for example, *analog watch* to differentiate from *digital watch*, or *acoustic guitar* as distinct from *electric guitar*.



## Blends

**blend (portmanteau)** word made from putting parts of two words together

RPE 6.8

Another common word formation process involves telescoping two words together, as Lewis Carroll does in the nonsense poem “Jabberwocky,” in which he creates *slithy* from *lithe* and *slimy*. Other examples of **blends**, also called **portmanteau** words, include the following: *apathetic* (from *apathy* + *pathetic*), *permafrost* (*permanent* + *frost*), *transistor* (*transfer* + *resistor*), *hassle* (*haggle* + *tussle*), *prissy* (*prim* + *sissy*), *blog* (*web* + *log*), *schmoodle* (*schmouzer* + *poodle*), and *brunch* (*breakfast* + *lunch*).

## Conversions

**conversion** change of a word’s syntactic category without changing form, such as a noun becoming a verb

hwæt!

*Portmanteau*, French for a kind of folding suitcase (a blend of *porter* ‘to carry’ and *manteau* ‘coat’), was first used by Lewis Carroll in 1882 to refer to blended words, such as those he used in his poem “Jabberwocky.”

Sometimes we create words by simply assigning them another syntactic category. For example, from the noun *mother* we have created the verb *mother* (and similarly *father* and *parent*), and from the noun *trash* we have the verb (*to*) *trash*. Such **conversions**, also called functional shifts, happen in a variety of ways; we can convert a noun to a verb as with *mother*, *trash*, *google*, or *friend*; or we can convert a verb to a noun, as in *impact*, *commute*, *blackmail*, *e-mail*, and *fax*. We also convert adjectives to verbs, as in *to savage* or *to total*, and adjectives to nouns, as in *a crazy*.

Some conversions induce a change in stress, though such stress patterns often vary dialectally.

**verbs:** transfér, permít, convert, pervért, commune

**nouns:** transfér, pérmit, cóvert, pérvért, cómmune

Conversions are quite common in English. Both words often become established, and then it is not obvious which word came first unless you look them up in a dictionary. For example, the noun *electronic mail*, which soon became simply *e-mail*, almost immediately become a verb as well: *She e-mailed me about the meeting*.

RPE 6.9

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# Language Alive!

## Blimey!

All of the following words were once longer phrases.

- *Howdy* came from *how do you do*.
- *Goodbye* came from *God be with you*.
- The word *blimey*, more common in British English, came from *God blame me* (or maybe *God blind me*).
- And the slightly archaic word *druthers* came from *would rather* as in *I would rather* and shifted from a verb phrase to a noun: *If I had my druthers, we wouldn't go to the fair*.

The process that reduces a longer phrase to a single word usually takes a long time, sometimes hundreds of years. You can see this process taking place over about 300 years with the word *goodbye* in the following quotes from the *Oxford English Dictionary* (given with the year they appeared in a text and the author's name):

- 1588 I thanke your worship, *God be wy you*. (William Shakespeare)  
 1591 *God b'uy* my Lord. (William Shakespeare)  
 1600 Gallants, *God buoye* all. (William Shakespeare)  
 1602 I so, *God buy' ye* (William Shakespeare)  
 1604 *God buy to you*. (William Shakespeare)  
 1607 *God b'y you* Mistresse Gallipot. (Thomas Middleton and Thomas Dekker)  
 1652 Heartily *Godbuy*, good Mr. Crasy. (Richard Brome)  
 1659 . . . his strength will scarce supply His Back to the Balcona, so *God b' wy* (Samuel Pepys)  
 1694 He flings up his tail . . . and so bids us *good-b'wy*. (John Cleveland)  
 1707 So to a Feast should I invite ye You'd stuff your Guts, and cry, *Good bwi't'ye*. (Edward Ward)  
 1719 *Good B' w'y!* with all my Heart. (Thomas D'Urfey)  
 1818 And so your humble servant, and *good-b'ye!* (George Gordon Byron)  
 1860 We then bade Ulrich *good-bye*, and went forward. (John Tyndall)  
 1874 Then he said *good-bye* to me . . . and so left me. (Francis Burnand)

And now we just say "bye!"

## Acronyms

**acronym** word formed from abbreviations of other words

**Acronyms** are abbreviations that can be formed in two ways. First, words can be formed from initial letters of each part of a compound word or phrase and then pronounced as the words they become: SARS and NASA are examples.

SARS	severe acute respiratory syndrome
NASA	National Aeronautics and Space Administration

## hwæt!

A handy place to look up unfamiliar acronyms is the website [all-acronyms.com](http://all-acronyms.com). Beware, though, that it claims no absolute authority on the etymology and definitions.

Humvee HMMWV (high-mobility multipurpose wheeled vehicle)  
 LARPlive action role-playing game  
 WASP white, Anglo-Saxon Protestant  
 ROM read-only memory  
 NIMBY not in my backyard  
 FAQs frequently asked questions

Some acronyms have become so ingrained in the language that we may no longer know what the letters once stood for; they have also usually lost their uppercase letters in the acronym.

laser light amplification by the stimulated emission of radiation  
 radar radio detecting and ranging  
 scuba self-contained underwater breathing apparatus  
 snafu situation normal all fouled up

**initialism** word formed from the initial letters of a group of words (CD)

The second type of acronym is the **initialism**, a word created by initial letters, which is pronounced with the letter names: DVD, FBI, CIA. Here are some familiar initialisms (also called abbreviations):

WMD weapons of mass destruction  
 OMG Oh my God  
 DVD digital versatile/video disk  
 NCAA National Collegiate Athletic Association  
 NPR National Public Radio  
 brb be right back (primarily used in online communication)  
 lol laughing out loud (primarily used in online communication)

We can also distinguish *orthographic initialisms* or *abbreviations*, in which the written word is a shortening of some other word, but we pronounce the whole word rather than the abbreviated form:

Jr., Dr., Mrs., Mr., wt. (for *weight*), g (for *gram*), state names—AZ, TN, WA, NY

## hwæt!

Ever wonder why *lb.* is the abbreviation for *pound* and *oz.* is the abbreviation for *ounce*? *Lb.* is an abbreviation of the first word of the Latin phrase *libra ponda*, which was an equivalent measurement for the Romans. And *ounce* was spelled *onza* in fifteenth-century Italian, when it came into common use in Europe, and was thus abbreviated *oz.*

A subtype of initialism is a word formed from letters within a word rather than from separate words.

TV/tv television

The initialism *ID*, taken from the first two letters of *identification*, has become a root word that can take an affix:

They were IDing everyone at the door.

Other languages also use a lot of acronyms and abbreviations. An example from French is SAMU, which comes from *Service d'Aide Médicale Urgent*, the agency people call in medical emergencies. And one from Spanish (which has a great many acronyms), is SEAT (pronounced [se-at]) for *Sociedad Español de Automóviles y Turismo*.

# Language Alive!

## Ms.

When you see *Ms.* written on something, how do you say it, and what does it mean? If you see it as a choice on a form along with *Mr.* and *Mrs.*, you might think it's an abbreviation. But it's not an abbreviation. The definition and etymology from the *Oxford English Dictionary* follows:

**Ms.**, *n.* A title of courtesy prefixed to the surname of a woman, sometimes with her first name interposed. *Ms.* has been adopted esp. in formal and business contexts as an alternative to *Mrs* and *Miss* principally as a means to avoid having to specify a woman's marital status (regarded as irrelevant, intrusive, or potentially discriminatory).

Some examples from the *Oxford English Dictionary*, going as far back as 1932, show its various uses as well as the conscious attempt to integrate it into the language in order to treat women and men equally.

- 1932: In addressing by letter a woman whose marital status is in doubt, should one write 'M's' or 'Miss'? (*New York Times*, May 29)
- 1949: Feminists . . . have often proposed that the two present-day titles be merged into 'Miss' (to be written 'Ms.'), with a plural 'Misses' (written 'Mss.'). (Mario Pei, *Story of Language*)
- 1952: Use abbreviation *Ms.* for all women addressees. This modern style solves an age-old problem. (*Simplified Letter*, publication of the National Office Management Association, Philadelphia)
- 1974: The Passport Office yesterday conceded the right to women to call themselves *Ms* (pronounced *Miz*) on their passports instead of *Mrs.* or *Miss*. (*London Daily Telegraph*, May 21)

The creation of this word is an example of a successful attempt at word manipulation for a political or social reason.

German also has many acronyms, though it tends to take a letter or two more than the initial letter of the word to make the new word easily pronounceable. So, *haribo*, the name of a gummy bear candy company, comes from Hans Riegel in Bonn, the founder. And *KaDeWe* is a big, well-known department store in Berlin whose name comes from Kaufhaus des Westens.

## Clipping

Another way to create words is to omit syllables (rather than morphemes). This process, called **clipping**, is the source of the following:

**clipping** making a word by omitting syllables in an existing word (e.g., *rad* from *radical*)

pantaloons	→	pants
streptococcus	→	strep



brother	→	bro
mathematics	→	math

It is typically the first syllable that becomes the word, but not always, as the following examples show.

influenza	→	flu
chrysanthemum	→	mum

Other languages also use clipping to form new words. The following examples of clipping are from German:

Mathemathik	→	Mathe	‘math’
AutoBus	→	Bus	‘bus’
Bibliothek	→	Bib	‘library’
Extempore	→	Ex	‘pop quiz’

**RPE 6.10**

## Backformation

### backformation

making a new word by omitting what appears to be a morpheme (usually a suffix or prefix) but actually isn't

Unless we know the history of a word, it is nearly impossible to tell which words are formed through **backformation**, even though many words enter the language in this way. Backformation is a process by which a word is formed by omitting what appears to be a morpheme but which in reality is not. For example, *edit* is a backformation from *editor*, and *scavenge* is backformed from *scavenger*. Both *editor* and *scavenger* came into English from other languages: *editor* from Latin *editus* and *scavenger* from Old French *scawager*. Note the /n/ that was inserted from the French word to the English word; this by analogy with other words like *messenger* (French, *messenger*) and *passenger* (French, *passager*). Although each of these words ends in *-er*, this *-er* is not equivalent to the *-er* affix that means ‘one who does X’, as in *driver* and *teacher*, where the *-er* is affixed to the verbs *drive* and *teach*. However, English speakers, by analogy, nevertheless unconsciously analyzed *scavenger* and *editor* as ending in the familiar “agentive” *-er* and backformed the verbs *edit* and *scavenge*. Similar examples, from the same historical contact with French, include *cobble*, *hawk*, *swindle*, and *burgle*, from *cobbler*, *hawker*, *swindler*, and *burglar*. Another historical example is *pease*, originally a mass noun (a noun that can't be counted—much *pease* is in the pot) and now interpreted as count (so now many *peas* are in the pot is what we say). You may be familiar with the nursery rhyme “Pease porridge hot. Pease porridge cold. Pease porridge in the pot, nine days old,” an example of the older form *pease*.

Still other, more recent examples of backformations include the following: *spectate*, *resurrect*, *enthuse*, *peoplewatch*, *backform*, *couth*, *statistic*, *intuit*, *babysit*, *televise*, *liaise*, *sightsee*, *typewrite*, *orientate*. Some may be more acceptable or standard, but all are formed by the same morphological process.

## Reduplication

### reduplication

making a word by doubling an entire free morpheme (total reduplication) or part of it (partial reduplication)

**Reduplication** is the process of forming new words by doubling either an entire free morpheme (total reduplication) or part of it (partial reduplication). English doesn't use reduplication very productively to form new words, though it does use a version of reduplication in certain expressions and in baby talk to form words related to or derived from the original meaning of a word (e.g., *wa-wa* from *water*).

knock knock, hocus-pocus, hoity-toity, tutti-frutti, bye bye, mama, dada, boo-boo, wawa (for *water*)

Other languages use reduplication much more productively. Indonesian uses total reduplication to form the plurals of nouns.

rumah	'house'	rumahrumah	'houses'
ibu	'mother'	ibubibu	'mothers'

Pangasinan, a language of the Philippines, uses partial reduplication to indicate plural.

baley	'town'	balbaley	'towns'
lupa	'face'	luplupa	'faces'
sondalo	'soldier'	sonsondalo	'soldiers'

Lushootseed, among other Salish language of the Pacific Northwest and British Columbia, uses reduplication in all sorts of ways. Let's look at two of them.

The *diminutive* morpheme doubles the initial consonant and vowel of the stem and results in a diminutive interpretation, as indicated by the following translations.

ʔálʔal	house	ʔáʔálʔal	hut
ʔúq <sup>w</sup> ud	pull out	ʔúʔúq <sup>w</sup> ud	pull part way out
híwil	go ahead	híhíwil	go on ahead a bit
q'íx <sup>w</sup>	upstream	q'íq'íx <sup>w</sup>	upstream a little bit

And the morphology of the so-called out-of-control form results from doubling the final consonant and vowel of the stem, resulting in interpretations like the following.

ʔát	fast, quickly	ʔátát	hurry up!
dʒáq'	fall, topple	dʒáq'áq'	stagger, totter
čǎx̌	split	čǎx̌ǎx̌	cracked to pieces
yúbil	starve	yúbúbil	tired out, sick

An example of reduplication that has come into English from Hawaiian is *wikiwiki*, meaning 'quick'. It is quickly gaining new meanings and functions (*We set up a wiki; Just wiki it*), however, and it is now used as a prefix, as in *wikipedia* and *wiktionary*. Or are these blends?

## Accent on Lexicographers

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Who writes dictionaries? Lexicographers provide the definitions, etymologies, clues to pronunciation, examples of use, and even syntactic uses. They are well educated and interested, even expert, in many areas—language and languages, history, culture, and so on. The job has changed quite a bit since the seventeenth century, when lexicographers were starting their work.

Commissioned to ‘fix’ and improve English, Samuel Johnson published pretty much single-handedly the *Dictionary of the English Language* in 1755. Noah Webster, pictured above, labored alone to publish *A Compendious Dictionary of the English Language* in 1806; one of his goals was to distinguish American from British English. He created many American spellings: *color*, *center*, *program*, and *catalog*, among others.

James Murray strove to compile a dictionary that would map out, with scientific accuracy, the history and meaning of English words, not only in England and America but around the world. Editors working with him collected 3.5 million citation slips submitted by a small army

of volunteers for the *Oxford English Dictionary*. The *OED* was published in installments from 1884 to 1928. When Murray died in 1915, after thirty-seven years as its editor, the *OED* had only reached the letter *T*.

The *OED*’s editors helped change the lexicographer’s role from prescriptive to much more descriptive, aiming to discover and document the language real people use, though it was still based on written, not spoken, language.

It might be surprising to learn that the *Dictionary of Slang and Unconventional English* was first published in 1937. Its editor, Eric Partridge, devoted his life to writing about some of the more curious aspects of language and thus perpetuated an interest in documenting *all* aspects of language, both standard and nonstandard.

The current editors are at work on the last volume of the *Dictionary of American Regional English*, which documents those ways in which our regional language varieties are distinct from each other; it focuses on the spoken rather than the written language. Lexicographer Frederic Cassidy was chief editor of this dictionary from its inception in 1965 until his death in 2000.

A distinct kind of dictionary has emerged that focuses more directly on usage. *Merriam-Webster’s Dictionary of English Usage*, for example, arranges in dictionary format a collection of “common problems of confused or disputed English usage from two perspectives: . . . historical background . . . and . . . present-day usage” (preface). It tackles such things as the distinction between *infer* and *imply*, *indubitably* and *undoubtedly*, *orientate* and *orient*.

Mass literacy, global communication, and technology have guaranteed the ongoing demand for dictionaries and have changed the





Erin McKean

way in which lexicographers compile and we retrieve information; search engines seek words or phrases from thousands of sources in a matter of seconds. Erin McKean, pictured here, has used all of these modern tools as an editor for American dictionaries at Oxford University Press and founder of Wordnik.com.

We don't always know today's lexicographers by name; there are so many of them working on diverse dictionary projects. They all, however, maintain a fascination with words, their histories, and their use.

*For more information*

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## Summary

In this chapter, we've gone beyond the borders of English affixation to look at the morphological properties of other languages. We've seen that languages can be classified by their morphological type as analytic or synthetic or on a continuum between these two types. English, in fact, is mostly analytic but has some synthetic properties, too. We've also discussed a wide range of morphological processes other than affixation, processes that allow us to continually and creatively add new words to our language and alter the meanings and structure of existing ones. Our discussion of regular word formation rules, such as compounding, as well as other nonsystematic ways of adding new words, such as eponyms and acronyms, clearly illustrates our enormous capacity for creativity in language and that language is a dynamic, ever-changing system.



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## Review, Practice, and Explore

### RPE 6.1 > Analytic? Synthetic?

- A. In the Lushootseed (dx<sup>w</sup>ləʃucid) language, the place name *Skykomish* can be broken down into the following morphemes. Based on this word, would you classify this language as more analytic or synthetic?

Skykomish

sq'ix<sup>w</sup>abš

s-q'ix<sup>w</sup>- abš

nominalizer—located upstream—people of  
'upstream people'

- B. Explain how this example from Chinese is illustrative of an analytic rather than a synthetic language.

我	所有	的	朋友	都	要	吃	才	蛋
wǒ	suǒyǒu	de	péngyou	dōu	yào	chī	jī	dàn
I	all	possessive	friend(s)	all	want	eat	chicken	egg(s)

'My friends all want to eat eggs.'

- C. Conduct some research on a language—perhaps one that you have studied—and determine what type of language it is. Is it more analytic or synthetic? Does it exhibit characteristics of a fusional language? An agglutinative language? Be sure to give examples and to label the morphemes.

## RPE 6.2 Japanese as Synthetic and Analytic

Japanese has agglutinative (synthetic) verbs but analytic nouns. Conduct some research on Japanese, collect examples of verbs and nouns, and illustrate those aspects that are synthetic and those that are analytic. If you find other examples of languages that share features of more than one language type, discuss those as well.

## RPE 6.3 Analyzing Yoruba Nasals

Recall the discussion in Chapter 4 of the various phonological processes that change one sound into another. Such processes are at work in Yoruba, leading to several different forms, called allomorphs, of the progressive morpheme. Based on the following data, what is the form of the progressive morpheme (equivalent to English *-ing*) in each set of Yoruba verbs? The English translations are given only in the infinitive. (Adapted from Cowan & Kakušan, 1985: 79)

present	progressive	
bá	ńbá	'to meet'
bé	ńbé	'to cut off'
bérù	ńbérù	'to fear'
bò	ńbò	'to cover'
bù	ńbù	'to cut'
progressive morpheme =		
dà	ńdà	'to pour'
dé	ńdé	'to arrive'
dì	ńdì	'to tie'
dìkpò	ńdìkpò	'to replace'
dúró	ńdúró	'to stand'

progressive morpheme =

kà	ɲkà	‘to fold’
kàn	ɲkàn	‘to touch’
kó	ɲkó	‘to gather’
kù	ɲkù	‘to remain’

progressive morpheme =

What kind of phonological process accounts for the different forms, or *allomorphs*, of the progressive morpheme in Yoruba?

#### RPE 6.4 Analyzing Iraqi Arabic Noun Stems

Based on the data in Set 1, what is the possessive morpheme in Iraqi Arabic? (Adapted from Cowan & Kakušan 1985: 88-89)

##### Set 1

##### Nonpossessive

walad  
qalam  
balad  
tanak  
ǰaras

##### possessive (my)

waladi  
qalami  
baladi  
tanaki  
ǰarasi

‘son’  
‘pencil’  
‘town’  
‘tin’  
‘bell’

possessive morpheme =

Now consider the following data. Assume that the form of the possessive morpheme doesn’t change, and that a phonological process applies to the nouns in Set 2 to derive their forms (which are different from the forms of the nouns in Set 1). What is that process and why does it occur?

##### Set 2

##### Nonpossessive

šaʕar  
bayal  
laḥam  
taxat  
šaʕab

##### possessive (my)

šaʕri  
bayli  
laḥmi  
taxti  
šaʕbi

‘hair’  
‘mule’  
‘meat’  
‘bench’  
‘people’

#### RPE 6.5 Slang

- Using the slang dictionaries in your library and online, discuss the origins and evolution of three slang words. If the words are still in use and the current meaning is related to or derived from the older meaning, discuss how their meanings have changed.
- Define and discuss three slang terms that you and your friends know and use. Are they listed in the slang dictionary? If they are, do they have the same meaning as your definitions? Do you think your slang words will be around in 10 years? Twenty years? Why or why not? See if you can determine the origins of your slang terms.

In your discussion, try to answer the following questions:

- What criteria do we use to define a word as slang?
- What role do dictionaries play in defining a word as slang?
- What is the difference between slang terms and dialect variation?

**RPE 6.6** Compounds

Sometimes it isn't obvious whether a group of words is a compound word or not. Consider the following:

cab ride  
iron gate  
paperback book  
paperback novel  
life insurance premium  
barking dog

Are these compound nouns? Why or why not? What kinds of tests can you use to find out whether they are compounds or not?

**RPE 6.7** Eponyms

- A. Choose at least five of the following eponyms, look them up in a good etymological dictionary such as *A New Dictionary of Eponyms* (Oxford University Press), and write a summary of each word's meaning and origin.

badminton, cardigan, derringer, forsythia, gorilla, hollandaise, jodhpurs, limousine, mackinaw, tuxedo, volt, welch, zeppelin, Amber alert, Enronomics, Casanova, Dear John, Dear Abby, jack-of-all-trades, boycott, Martha moment, Starbucks, John Hancock, quisling, John Doe, bogart, Uncle Tom, Aunt Jemima, Electra, oedipal, Ophelia, the Atkins, (to be) borked

- B. Consider the following words, which all originally came from brand names. Which of these do you use as the generic name for the item?

escalator, granola, cellophane, zipper, yo-yo, linoleum, kerosene, jungle gym, dumpster, frisbee, chapstick, port-a-potty, xerox, Q-tip, band-aid, taser, ping-pong

**RPE 6.8** Blends

What do the following words mean, and what words did they come from?

skullet, pomo, modem, spork

Come up with two other blends, and give the words that they are blended from.

**RPE 6.9** Creative Morphology in Poetry

Poet Charles Wright employs a number of word formation processes in his work. One such process in particular is illustrated in the following boldface words from his poetry. What is the word formation he uses? Explain briefly.

- A. From "Black and Blue":

Like deer in a leafy light,  
window and looking glass,  
Yesterdays flash and reflect,  
Ready to bolt, ready to empty out.  
**Horizon** them black and blue.



## B. From “Chickamauga”:

History handles our past like spoiled fruit.  
 Mid-morning, late-century light  
**calicoed** under the peach trees.  
 Fingers us here. Fingers us here and here.

## C. From “Meditation on Song and Structure”:

In North Carolina, half a century ago,  
 Bird song over black water,  
 Lake Llewellyn **Bibled** and night-colored,  
 mockingbird  
 Soul-throated, like light, a little light in great darkness.

## D. From “Meditation on Song and Structure”:

The afternoon breaking away in little pieces,  
 Siren’s squeal from the bypass,  
 The void’s tattoo, *Nothing Matters*,  
**mottoed** across our white hearts?

Below are two more examples from the poetry of Charles Wright of a word formation process discussed in the chapter. What process is Wright using in excerpts E and F?

## E. From “A Short History of the Shadow”:

Now into June, cloverheads tight, **Seurating**<sup>1</sup> the yard.

## F. From “Journal of English Days”:

November’s my favorite month,  
 the downside of autumn  
 And winter in first array, the sky  
**Constabled**<sup>2</sup> now and again  
 Over Kensington Gardens:  
 north of the Serpentine,

## RPE 6.10 &gt; Clippings

Here are a few clippings not mentioned in the chapter:

jag, memo, typo, lab, gas

Determine what words each of these came from. Come up with three more examples of words formed by clipping.

## RPE 6.11 &gt; Duplicate Reduplication

A relatively recent phenomenon in English is the doubling of certain words and phrases to create a new meaning. So someone might say, “No, I don’t like like him” or “Yes, she’s my girlfriend girlfriend,” which seem to be used to contrast one meaning of a word with another. Come up

1. Reference is to Georges Seurat’s pointillist paintings (e.g., *Le Pont de Courbevoie*).

2. Reference is to John Constable.

with several other examples of words that can do this kind of reduplication, and explain how the doubling of these words changes the meaning of the original word. Describe any limitations on the reduplication (which words can do it, which can't) and therefore how productive a process it is.

### **RPE** 6.12 Forming New Words

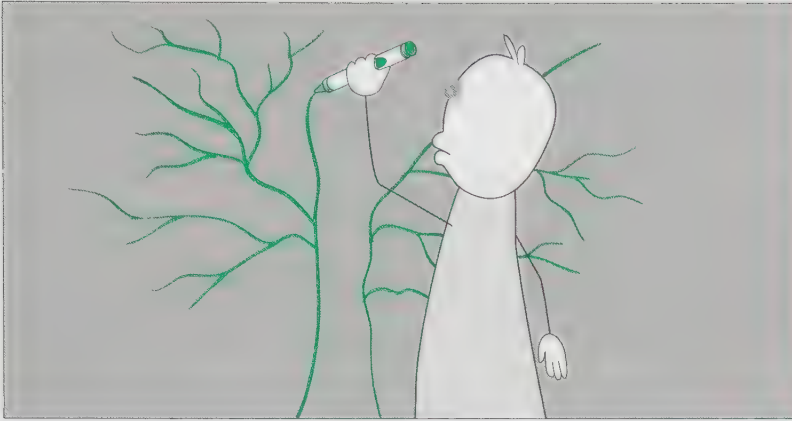
Recall the following word formation processes used in English: affixation, compounding, blending, clipping, acronyms, eponyms, conversions, backformations, and reduplication.

Now, consider the following words from Word Spy and previous nominees for the American Dialect Society's Word of the Year.

chugger, bridezilla, NIMBY, manscaping, crittercam, nanopublishing, furkid, tofurkey, refudiate

Explain which process of word formation has applied in each word. Look up the meaning of each word; if you can find no meaning, make one up!





## Chapter at a Glance

# Syntax: Heads and Phrases

## Key Concepts

- Words are organized into phrases and clauses.
- Each phrase is of a particular syntactic category (noun phrase, verb phrase, adjective phrase, etc.), and each has a head (noun, verb, adjective, etc.).
- Phrase structure rules provide us with a way to draw, or diagram, phrases and to capture certain important generalizations about how syntactic structure is organized.
- The largest phrase is the clause, a syntactic unit consisting of a subject and a predicate.
- Clauses are independent or subordinate, depending on whether they are contained in larger phrases.

### Did You Know . . . ?

The Root of Trees  
Syntax in the “Real” World

### Language Alive! How Many Modals?

Don’t Use Double Negatives. NOT!  
English Didn’t Always *Do*

### Linguistics in the News What’s the Right Answer?

### Accent on Teaching with Trees

## Nouns and Noun Phrases

A Phrase Structure Rule for Noun Phrases

## Verbs and Verb Phrases

A Phrase Structure Rule for Verb Phrases

Evidence for the Aux Position

A Phrase Structure Rule for Clauses

## Adjectives and Adjective Phrases

Adjective Phrase Positions

A Variable Phrase

## Adverbs and Adverb Phrases

Adverb Phrase Positions

## Prepositions and Prepositional Phrases

Prepositional Phrase Positions

## Summary of Phrase Structure Rules

## More Clauses

Subjects and Predicates

Independent and Subordinate Clauses

What Is a Sentence?

## Summary

## Sources and Resources

## Review, Practice, and Explore



*What did I learn in school? The most valuable thing by far  
was grammar.*

—NORTHROP FRYE

**syntax** system of rules and principles that describe how we organize words into phrases and phrases into larger units, the largest being the clause; also, the study of this system

In this chapter, we will explore our knowledge of yet another system, namely, the system of rules and principles that allows us to combine words into larger units. This system of rules is called **syntax**. For example, we know that words must be organized in a certain order in the sentence (just as affixes and roots occur in certain orders in words). In fact, the position of a word in the sentence is often the only way we know its syntactic category (part of speech). For example, the word *walks* can be either a verb or a noun, and we know how to interpret this word only when we see where it occurs in the sentence.

The girl goes on many long *walks*.

The girl *walks* the dogs.

In which sentence is *walks* a noun? In which is it a verb? It's a noun in the first sentence because of its position; it occurs to the right of *long*, the adjective that modifies it. In the second sentence, on the other hand, *walks* is a verb; it occurs after the subject, *the girl*, and before its object, *the dogs*. Put more simply, we know that *walks* in the first sentence is different from *walks* in the second, regardless of whether we have the technical vocabulary we're using here to explain that difference.

Another thing we know about syntax is that words can be grouped or combined in certain ways. For example, we'd all probably agree that the boxed part in the following sentence is a possible word group. We'll soon describe more specifically what we mean by *word group* and give you some tests for identifying such groups, but you do have some intuitions about which words go together to form such phrasal units.

Six hungry gorillas spotted the sandwiches.

We'd also probably agree that the boxed group of words in the following sentence is not a possible unit:

Six hungry gorillas spotted the sandwiches.

So, it appears that sentences are not simply “flat” strings of words; they have some kind of internal structure, structure about which we have pretty strong intuitions.

So far, we've referred to long strings of words as sentences. But as we'll see, we actually know that *sentence* is a general term for a long string of words but that sentences can be made up of one or more *clauses*, syntactic units that we are fully, if unconsciously, aware of. We know, for example,

that if we combine *spotted the sandwiches* with *six hungry gorillas*, we have a complete syntactic unit, namely, a clause. And we also know that the following sentence is (one big) clause but that it also contains two smaller clauses inside it:

The gorillas thought that *they spotted the sandwiches* when *they were strolling through the jungle*.

In this chapter, we explore a specific aspect of your intuitive knowledge of syntax, in particular your knowledge of syntactic categories such as nouns, verbs, and so on, and how those categories can be combined with other words to form larger categories, or **phrases**. We will also discuss the largest syntactic unit, the clause, and how some clauses are independent and others are subordinate. We'll also take a brief look at how clauses differ from sentences (and how they can be the same!). We will introduce you to phrase structure rules, a notation that allows us to express this knowledge of syntactic units. We will also explore a possible parameter based on language variation over space (looking at evidence from modern French) and also over time (looking at evidence from earlier varieties of English). We'll see that our knowledge of categories is likely part of Universal Grammar.

**phrase** syntactic unit (NP, VP, etc.) headed by a syntactic category (N, V, etc.)

## Nouns and Noun Phrases

Many children learn in school that a noun is a “person, place, or thing.” While this semantic definition is useful, it tells us nothing about the fact that we use a great deal of information, other than meaning, to identify nouns. For example, we can recognize nouns even though we have no idea what they mean. We know that in the phrase *the granflons*, the nonsense word *granflons* is a noun because we know that in English nouns usually follow a certain set of words (in this case, the determiner *the*). In Chapter 5, we identified these words as quantifiers, numerals, and determiners, all of which are functional categories. Though these categories are distinct in a number of important ways, for simplicity here we'll assume that they are all members of a single functional category, determiner (Det).

Determiners: *the, these, this, all, some, six*, etc.

Six houses, all dogs, few people

Nouns can also be introduced by more than one determiner—*the six houses, all eight dogs, a few people*—and these elements must also occur in a particular order. We know, for example, that *\*eight all dogs* is ungrammatical but that *all eight dogs* is fine. We also know that certain nouns need no determiner at all; generic nouns and mass nouns can occur without them.

*Lions* roar. (generic plural noun)

Lou makes lovely *jewelry*. (mass noun)

**hwæt!**

Not all languages have determiners, which is one reason that people who learn English as a second language often omit them in English.

And proper names usually occur without determiners, too:

*Mary* walked in the door. (proper name)

\*The *Mary* walked in the door.

(We can say *I know a lot of Marys*, but in this sense *Mary* has become a common noun. We'll talk more about the proper/common distinction in Chapter 9, on semantics.)

Some proper nouns do take determiners, however:

The *Chunnel* is an amazing innovation.

The *New York Mets* played a game yesterday.

The English determiner system is therefore very complex, and a full description of it (if we could even give one) is beyond our scope here. Simply observe that, typically, a good test for whether a word is a noun or not is to see if it can occur after one of the function words from the category D. We can turn this statement around into a generalization about the syntax of D: this functional category introduces nouns.

## A Phrase Structure Rule for Noun Phrases

Descriptions and generalizations about the syntax of nouns and of the categories that introduce nouns are aspects of **phrase structure** and can be expressed by phrase structure rules for the larger syntactic unit, the noun phrase, or NP.

In phrase structure rules, items in parentheses are optional. The following rule means that although NP must contain a noun, the determiner element is optional. (The phrase structure rule for NP is of course much more complex than the one we provide here, which allows N to be preceded by only a single, optional determiner.) You can read the following phrase structure rule as “an NP can contain a determiner (optional) and must contain a noun.”

NP → (Det) N

Det → *these, six, all, every, the/a*

**phrase structure**  
system of rules that  
organizes words  
into larger units or  
phrases

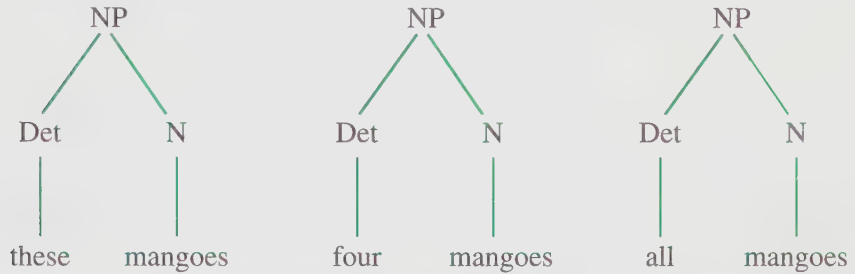
### RPE 7.1

**head** word whose  
syntactic category  
determines the  
category of the  
phrase

**constituent** group  
of words that forms  
a larger syntactic  
unit

Phrase structure rules provide a way to express some of the basic properties of syntactic structure. Phrase structure is actually very complex, and how to represent it most accurately is a subject of constant debate among linguists who study syntactic theory. The simple phrase structure rules we will use in this chapter express the basic syntactic concepts that any notation must capture, namely, that syntactic structure is divided into phrases and that each phrase must have a **head**. For example, a noun phrase (NP) must include at least a noun, and a verb phrase must include at least a verb, and so on. The head of the phrase is the most important part because it determines the category of the phrase. All the elements that combine to form a phrase are called **constituents**. So, N is the head of NP, a phrase that can also include D. Both D and N are constituents of NP. Heads combine with other elements to make up phrases.

We can draw tree diagrams, a graphic representation of phrase structure, for simple noun phrases using the phrase structure rule for NP. Some examples are given here. The constituents of the noun phrase are *these* and *mangoes* in one diagram, *four* and *mangoes* in another, and *all* and *mangoes* in another. The noun *mangoes* is the head of each NP. All of the following NP tree structures are built from the phrase structure rule  $NP \rightarrow (D) N$ .



This simple phrase structure rule captures the syntax of the simplest noun phrases. We will modify this rule shortly to provide a more accurate description of other English noun phrases (such as *the delicious mangoes* or *the mangoes from Florida*).

## Verbs and Verb Phrases

Continuing our discussion of phrases, we turn now to the verb phrase (VP), one of the basic building blocks of the sentence. First, let's review some important facts about verbs that we discussed in Chapter 5.

Recall that verbs in English have as many as five forms: *infinitive*, *present tense*, *past tense*, *present participle*, and *past participle*. The forms of the verbs are morphological. Syntactically, verbs can be divided into three groups: **auxiliary**, **main**, and **modal**.

**auxiliary verb** form of *have*, *be*, or *do* that occurs in Aux, a syntactic position preceding V

**main verb** verb that occurs under V and is head of VP

**modal verb** class of verbs (*can/could*, *may/might*, etc.) that occur in Aux

### Main verbs: *feel*, *go*, *eat*, *run*, *hope*

Horatio *feels* happy.

*went* on a trip.

*ate* breadfruit.

*ran* the Boston Marathon.

*hopes* to win the election.

### Auxiliary verbs: *have*, *be*

Horatio *has* eaten too much candy.

*is* running for his life.

### Modal verbs: *may*, *might*, *shall*, *should*, *will*, *would*, *can*, *could*, *must*

Horatio *may*, *might*, *shall*, *should*, *will*, *would*, *can*, *could*, *must* go on a cruise.



Auxiliary, main, and modal verbs occur in a certain order in English. The following sentences illustrate the various combinations of the main verb *read* with auxiliary and modal verbs. These combinations follow a particular syntactic pattern, shown by the fact that the first four sentences are grammatical and the next three sentences, in which orders are rearranged, are ungrammatical.

Scarlett *should have been reading* under the umbrella.

Scarlett *should be reading* under the umbrella.

Scarlett *should read* under the umbrella.

Scarlett *read* under the umbrella.

\*Scarlett *have should been reading* under the umbrella.

\*Scarlett *should reading be* under the umbrella.

\*Scarlett *read should* under the umbrella.

In addition to a main verb, the verb phrase can include as many as three other verbs. These options include a modal (which, if present, must come first) and as many as two auxiliary verbs, forms of *have* or *be*. Examples of each possible order are given here.

modal + *have* + *be* + main verb

modal + *have* + main verb

modal + *be* + main verb

modal + main verb

*have* + main verb

*have* + *be* + main verb

*be* + main verb

main verb

might have been sleeping

might have slept

might be sleeping

might sleep

has slept

has been sleeping

is sleeping

slept

## Language Alive!

### How Many Modals?

Speakers of other varieties of English, primarily in the southeastern United States, routinely produce sentences with two modals and find this double modal construction completely natural. Which modals they are varies from person to person and across subregions of the Southeast:

We *might could sing* at the concert.

modal modal main verb

I *may should apply* for a new job.

modal modal main verb

Two modal verbs is the limit, however. No variety of English allows sentences like the following:

\*We *might could would sing* at the concert.

modal modal modal main verb

From these data, we can see that main verbs are not optional in the sentence (which makes sense, because you can't have a sentence without a verb or verb phrase), and they can be preceded by as many as three other verbal elements. These elements must occur in a specific order; modals precede auxiliary *have*, *have* precedes *be*, and last is the main verb. These three elements are optional, but the main verb is not. So, we can state the order of verbal elements as follows, with modals and auxiliary verbs in parentheses:

(modal) (have) (be) main verb

## RPE 7.2

### A Phrase Structure Rule for Verb Phrases

Because the main verb is required in the verb phrase, it is the *head* of the verb phrase (VP). Just as in NP, the elements that precede the main verb are functional categories, namely, auxiliary verbs and modals. Auxiliary verbs and modals are distinct from each other, but for simplicity we'll refer to them as members of a single functional category, Aux. As we did with NP, we'll also only diagram sentences with a single Aux element, to keep things simple.

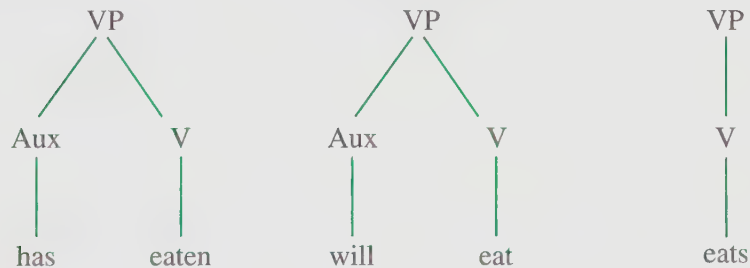
The following phrase structure rule captures the generalization that V in English is optionally preceded by an Aux element, namely an auxiliary verb or modal.

VP → (Aux) V

Aux → modal, *have*, *be*

## RPE 7.3

With this rule, we can draw the following trees:



## hwaet!

Tree diagrams are also used in other fields to help sort out complex ideas by organizing them on paper or onscreen; for example, math and probability, genealogy, management and planning (workload and schedules), sports ratings, and biological classification (species, genus, family, order, etc.).

Again, this rule is very simple and allows us to generate only one kind of VP, namely, a VP that is made up of only a main verb, or of one auxiliary verb or modal and a main verb. We'll elaborate this rule later when we consider the phrase structure of other categories that can occur in VP.

### Evidence for the Aux Position

So far, we've simply assumed, based on the order of verbs in the verb phrase, that auxiliary verbs and modals occur in Aux and main verbs occur in V. In this section, we'll look at some syntactic puzzles that provide evidence for this distinction. We'll then see

**negation** a logical operation—when the negation of a proposition is true, that proposition is false, and vice versa

that we need to revise our rule for VP in order to capture some significant differences between main verbs and those that occur in Aux.

When we look at how **negation** works in English, we see a clear difference between modal and auxiliary verbs and main verbs. Auxiliary verbs and modals, which here we refer to collectively as Aux verbs, typically occur before the negative adverb *not*.

**Negation:** *have/be/modal + not*

Joachim is *not* playing a game of chess.

Joachim has *not* played a game of chess.

Joachim must *not* play a game of chess.

Main verbs can't occur in this position:

\*Joachim played *not* a game of chess.

## Language Alive!

### Don't Use Double Negatives. NOT!

Most of you were probably taught to avoid using double negatives, as in *You don't know nothing*, even though they might sound just fine to you. Double negative constructions are highly stigmatized because they occur in dialects whose speakers are stigmatized, namely, speakers of southeastern U.S. English, African American English, and Hispanic English. Double negatives are also more common among blue-collar speakers than among white-collar ones. But double negatives are not only very common among the world's languages (French is an example, with *ne-pas*), they were also very common in earlier varieties of English. In fact, triple and even quadruple negatives were not uncommon!

Spanish:	Juan no sabe nada. 'Juan no knows nothing.'
English:	Juan don't know nothing.
Middle English:	He nevere yet no vileynye ne sayde 'he never yet no villainy not said'

—Chaucer, *Canterbury Tales*

### subject-auxiliary inversion

movement of an auxiliary verb to sentence-initial position (preceding the subject) to form a question

### Subject-Auxiliary Inversion

Another difference between auxiliary and modal verbs and main verbs is that Aux verbs appear in sentence-initial position in yes/no questions. This question formation rule is called **subject-auxiliary inversion**, or SAI, a process by which Aux verbs *move* over the subject NP. (We discuss syntactic movement more in Chapter 8.)

Minerva *is* singing the aria.

*Is* Minerva singing the aria?

Joachim *has* played an excellent game of chess.  
*Has* Joachim played an excellent game of chess?  
 Joachim *can* play an excellent game of chess.  
*Can* Joachim play an excellent game of chess?

Main verbs in English cannot undergo SAI. If we try to invert the main verb and the subject, we get a completely ungrammatical sentence in English (though the order is perfectly grammatical in some languages).

Minerva *sings* the aria.  
 \**Sings* Minerva the aria?

Another difference between English main verbs and Aux verbs is that only Aux verbs can occur in tag questions, questions that are added on to the end of the sentence by a rule we'll refer to as **tag question formation**.

Minerva is singing the aria, *isn't she*?  
 Joachim can't play chess, *can he*?  
 Joachim has played an excellent game of chess, *hasn't he*?

Main verbs cannot occur in tag questions, which is why we never produce sentences such as this one:

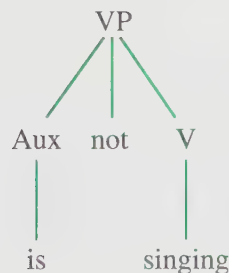
\*Joachim played an excellent game of chess, *playedn't he*?

Summarizing, it appears that there is a lot of evidence for a distinction between Aux verbs and main verbs in English:

Only Aux verbs

- undergo SAI
- occur to the left of *not*
- show up in tag questions

We can explain this syntactic distinction by hypothesizing that auxiliary verbs and modals occur in a syntactic position, what we call Aux, to the left of (optional) *not*. Main verbs occur in a different position, V, to the right of *not*.



### tag question

**formation** syntactic rule that "copies" the subject and an auxiliary or modal verb in sentence-final position:  
*Bert should leave, shouldn't he?*



## English Do Insertion

So far, it seems quite clear that there is a distinction in English between the Aux and V positions. But what if there is no auxiliary element in a sentence? What happens in these sentences? Is there an Aux position present or not?

Minerva sings/sang the aria.

Joachim plays/played a game of chess.

We are now faced with a *theoretical* question because the answer is not yet something we can see; we need to find data that support or refute our hypothesis about the phrase structure of VP.

We might simply say that in these sentences, Aux, which is optional anyway, is simply omitted. But in fact, there is evidence that even in such sentences, Aux is still there. This evidence comes from a syntactic phenomenon called **do insertion**.

When you read about negation, SAI, and tag questions above, you may have noticed that the ungrammatical sentences we discussed with only a main verb (we repeat them below), become grammatical when we insert the pleonastic auxiliary verb *do*.

\*Joachim played not a game of chess. (negation)

\*Sings Minerva the aria? (SAI)

\*Joachim played an excellent game of chess,  
    *playedn't he?* (tag question formation)

Joachim *didn't* play a game of chess.

*Does* Minerva sing the aria?

Joachim played a game of chess, *didn't he?*

These data illustrate a syntactic pattern that seems peculiar to English, namely, the insertion of a *dummy*—or in more technical terms, **pleonastic**—auxiliary verb *do*. This *do* insertion occurs in sentences without an auxiliary or modal verb, in contexts in which such an auxiliary or modal is needed to form a question or negate the sentence.

Another way to look at *do* is in terms of the Aux position itself. We can say that in sentences that express tense but that do not have auxiliary verbs, the Aux position is nevertheless still there. When such sentences are negated or questioned, *do* shows up in Aux to do the work of an auxiliary verb. This suggests that English speakers' knowledge of syntax includes a *do* insertion rule that can be informally stated this way:

### Do insertion

To perform subject-auxiliary inversion, negation, and tag question formation, insert *do* in Aux if Aux is otherwise empty.

It appears, then, that there is very good reason to assume that in English, the Aux position is there in all tensed clauses, even if it isn't filled with an actual verb. It also appears that English, unlike other languages, has a pleonastic auxiliary that can be inserted in Aux to do the work of an auxiliary verb under certain conditions.

### do insertion

insertion of  
pleonastic *do* into  
empty Aux to form  
questions, tags, or  
negative sentences

### pleonastic *do*

"dummy," or  
semantically empty,  
auxiliary verb

# Language Alive!

## English Didn't Always Do

English has not always had an auxiliary verb *do*. Old English lacked *do* altogether. Auxiliary *do* began to appear in negatives and questions in Middle English (1100–1400), though we still also find examples of such constructions without *do*. (Examples are from Millward 1996: 186.)

My maister did not graunt it. ('My master did not grant it.')  
 Fader, why do ye wepe? ('Father, why do you weep?')  
 Gaf ye the child any thing? ('Give you the child any thing?')

Also in Middle English, nonemphatic *do* appears:

Unto the mayde that hir doth serve  
 To the maid that her doth serve

That *do* is inconsistent during this period suggests that English was still in transition and that *do* insertion was not (yet) an obligatory rule.

It seems that in Early Modern English (1500–1800), *do* insertion was optional. (Shakespeare sometimes used both constructions in the same play!)

Why do you look on me?  
 Why look you so upon me? (*As You Like It*)

And we also find both negative sentences with negation following the main verb and negative sentences with auxiliary *do*.

I doubt it not. (*Romeo and Juliet*)  
 I do not doubt you. (*Hamlet*)

Not until very late Early Modern English did *do* insertion become an obligatory rule in English, and speakers began to form questions and negatives the way we do today.

A scene from the 2006 film *As You Like It* based on Shakespeare's play, directed by Kenneth Branagh.



## Emphatic and Main Verb Do

The pleonastic auxiliary *do* is sometimes inserted in sentences for other reasons. For example, in sentences that lack an auxiliary or modal, we might insert *do* to emphasize something. This emphatic *do* is stressed.

But I *did* clean my room!  
 So you *did* eat that last piece of cake! You rat!

The sentences sound very odd if *do* is not emphatic and is pronounced with level intonation.

But I did clean my room.  
You did eat that last piece of cake.

And there is yet another place where we find *do* in English:

I *did* my homework./I am *doing* my homework./I have *done* my homework.  
They *did* a good job on the project.  
You *do* the dishes every night.

In these examples, *do* is the main verb in the sentence. We know this because if we want to negate or question such sentences, *do* insertion applies, just as it does in other sentences with main verbs and no Aux verb.

*Did* I do my homework? (SAI)  
They *didn't* do a good job on the project. (negation)  
You do the dishes every night, *don't* you? (tag question formation)

## A Phrase Structure Rule for Clauses

We have seen that there is quite a bit of evidence that the Aux position is not part of VP, but rather a separate constituent altogether. Let's consider one more piece of evidence, illustrated by the following sentences.

Joachim played a game of chess but Minerva didn't.  
Minerva won't sing the aria but Joachim will.

These sentences illustrate a phenomenon called VP deletion, which we discuss in more detail in Chapter 8. What's important to notice here is that VP deletion seems to operate only on VP, but not on Aux:

Joachim played a game of chess but Minerva didn't ~~play a game of chess~~.

Minerva won't sing the aria but Joachim will ~~sing the aria~~.

The evidence from VP deletion, together with the other evidence we have discussed, supports the hypothesis that Aux is actually separate from VP. To capture this distinction, we revise our rules for VP and Aux as follows, where Aux is a separate node, optionally filled with a modal or auxiliary.

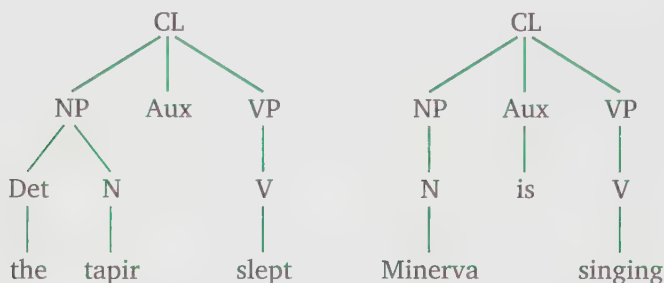
VP → V  
Aux → (modal) (*have*) (*be*) or (*do*)

We can now propose a phrase structure rule for the clause, or CL, where Aux is separate from VP (and present, even if it is not filled with an actual word).

CL → NP Aux VP



Using these rules, we draw the following simple tree diagrams:



We will need to amend our phrase structure rules in order to draw more complex sentences (such as *Minerva is singing the aria* and *The tapir feels sleepy* and others). We will explore how we can extend our simple phrase structure rules to draw more complex tree diagrams below.

## RPE 7.5

## Adjectives and Adjective Phrases

Adjectives are words that describe nouns: *tall* trees, *happy* child, *enormous* hogs. Adjectives (Adj) can themselves be modified by members of the functional category Deg, which stands for *degree*, such as *so*, *too*, *very*, *rather*, and *quite*.

the *rather enormous* hog

Deg Adj

a *very happy* child

Deg Adj

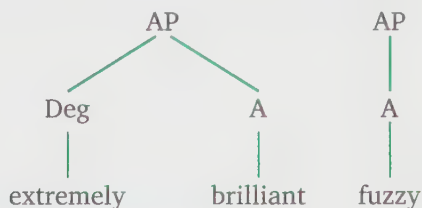
These examples suggest that a simple phrase structure rule for Adjective Phrase is the following:

AP → (Deg) A

Deg → *very*, *so*, *rather*



We can now draw simple trees for the adjective phrase (AP):



## Adjective Phrase Positions

Because adjective phrases modify nouns, they occur in certain positions in the sentence where they can do just that. One position is called *prenominal* position, the position before a noun in a noun phrase. The adjective phrases in the two preceding examples occur in prenominal position, as do those in the following noun phrases:

hwæt!

In Romance languages, adjectives occur before and after the noun, but in different ways than in English. Descriptive adjectives such as color adjectives occur after the noun (French: *le chat noir* ‘the black cat’), but other adjectives occur before the noun (*mon vieil ami* ‘my longtime friend’.)

the *enormous* hog  
six *enormous* hogs  
all *very happy* children

Adjective phrases can also occur after certain nouns in English, in *postnominal* position, right after the noun in a noun phrase:

something *wicked*  
the options *available*  
the heir *apparent*

### RPE 7.6

We can now elaborate our phrase structure rule for NP to include prenominal and postnominal adjective phrases:

NP → (Det) (AP) N (AP)

Adjective phrases also occur in what we call *predicate* position, immediately following what are called **linking verbs**—verbs that link the subject with an adjective phrase that describes it. Linking verbs include *remain*, *appear*, *become*, *be*, and “sense” verbs such as *feel*, *taste*, *look*, *smell*, and *sound*. (In traditional grammar, adjective phrases in this position are called *predicate adjectives*.) The following italicized adjective phrases are in predicate position:

The hog remained/appeared/became/is/seemed *enormous*.  
(subject) (linking verb) (adjective)

The pork tasted/smelled very *funny*.  
(subject) (linking verb) (adjective)

To diagram these sentences, we need to elaborate our phrase structure rule for VP to include an optional AP after V. We can do this by revising the VP rule in the following way:

VP → (Aux) V (AP)

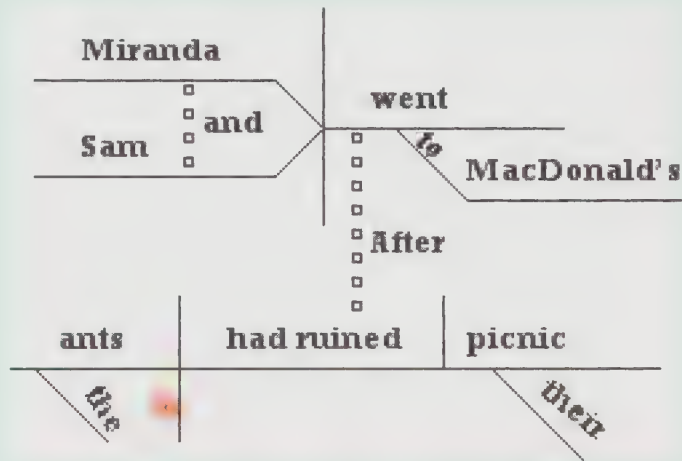
**linking verb** verb that “links” the subject of the sentence with a phrase that describes it, usually an adjective phrase

## Did You Know?



## The Root of Trees

Sentence diagrams have been around for a long time, though the “tree” diagrams we use here are a relatively recent version of graphic representations of the relationships among words in a sentence. Sentence diagrams date back to “balloon” diagrams of W. S. Clark, in his 1847 book *A Practical Grammar: In Which Words, Phrases & Sentences are Classified According to Their Offices and Their Various Relationships to Each Another*. Though we don’t see balloon diagrams anymore, you may be familiar with their descendent, Reed-Kellogg diagrams, invented by Alonzo Reed and Brainerd Kellogg, and first presented in their 1877 book *Higher Lessons in English*. Rather than balloons or trees, Reed-Kellogg diagrams use horizontal, vertical, and slanted lines to express relationships among constituents in the sentence. A vertical line divides the subject from the predicate for example, and modifiers, such as adjectives, are drawn on slanted lines connected with the word or phrase they modify.



Source: [http://www.utexas.edu/courses/langling/e360k/handouts/diagrams/diagram\\_basics/basics.html](http://www.utexas.edu/courses/langling/e360k/handouts/diagrams/diagram_basics/basics.html)—accessed 10-01-11. Used by permission.

Within generative grammar, the approach we take in this book, there are a number of theories of phrase structure and diagramming: Head-driven Phrase Structure Grammar (HPSG), Generalized Phrase Structure Grammar (GPSG), Tree-adjoining Grammar, Relational Grammar, Lexical Functional Grammar (LFG), among others. Though each theory differs in significant ways from the others, all strive to represent the relationships among constituents in the clause, relationships that cannot be captured by a linear, or “flat” structure.

Author Kitty Burns Florey gives the history of diagramming sentences and tells of her experiences in sixth grade in her popular 2006 memoir *Sister Bernadette's Barking Dog: The Quirky History and Lost Art of Diagramming Sentences*.

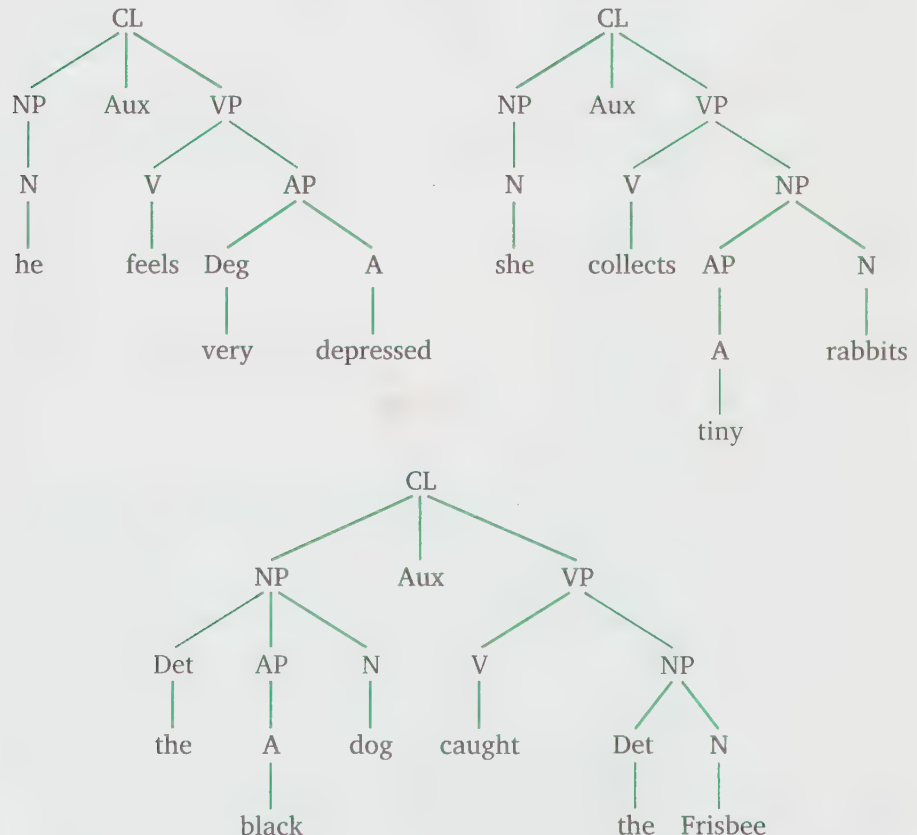
## A Variable Phrase

We all know, however, that AP isn't the only kind of phrase that can follow a verb; at this point, our phrase structure rule is quite restrictive. It does not allow us to diagram the VPs in such sentences as *The enormous hog talked to the goose* or *The enormous hog won a prize yesterday*. We can't even diagram the VP in the sentence *The enormous hog won the prize*, where the verb *won* is followed by a simple NP. We can remedy this situation, however, by simply saying that VP can be followed by a phrase of *any* category, not just AP. We can use a variable, X, to stand for any category (so XP can be NP, VP, AP, etc.). We can now write a more accurate rule for VP:

VP  $\rightarrow$  V (XP)

XP = a phrase of any category (NP, AP, etc.)

Some tree diagrams that conform to our phrase structure rules so far are given here.



hwæt!

Words that are not typically adjectives can become adjectives, as evidenced by their pairing with degree words: *very now* and *so last year*.

LINGUISTICS  
IN THE NEWS

## What's the Right Answer?

**D**id you have to take the Scholastic Aptitude Test (SAT) when you applied to colleges? Do you remember the grammar section of the test? How did you do?

In school, we learn that there is a difference between correct and incorrect grammar and that good speaking and writing depend on knowing the difference between the two. The SAT tests that knowledge. And the Educational Testing Service, which generates and scores the SAT, has all the right answers, right? Wrong. It turns out that "right" and "wrong" answers on the grammar section are somewhat controversial. In fact, there was quite a flap over one of the answers on the PSAT, the practice exam that prepares students for the SAT. The question was whether this sentence was grammatical or whether there was an error:

Toni Morrison's genius enables her to create novels that arise from and express the injustices African Americans have endured.

What do you think?

The intended answer was "no error." But this answer was challenged by high school journalism teacher Kevin Keegan, who argued that, according to well-known rules of prescriptive grammar, the sentence is

ungrammatical because the pronoun *her* cannot take the possessive phrase *Toni Morrison's* as its antecedent.

Keegan's claim sparked something of a grammatical firestorm, spawning articles in the *New Yorker* magazine, the *New York Times*, and the *Weekly Standard*, among others. In the face of the controversy, the Educational Testing Service felt obliged to convene a panel to decide what to do. In the end, the question was dropped from the test, the test was rescored, and scores overall improved as a result, which means that many students found an error in the test sentence and originally got the answer "wrong."

This controversy over pronouns and antecedents illustrates a number of issues about the politics of language and attitudes about grammar, summarized by linguist Geoffrey Nunberg in an article in the *New York Times*. One issue is that there is not a consensus on what is right or wrong even among style manuals; another is that *usage*, or how we actually use language (which is what students relied on when finding no error in the Toni Morrison sentence), often diverges from the rules and conventions of the authorities. Part of students' anxiety over grammar, then, comes from their uncertainty over how grammar errors are defined

and, in terms of testing, scored. It is no wonder that students are afflicted with "grammar anxiety"; they are taught that much hinges on some notion of grammatical correctness, but how grammatical correctness is defined remains something of a mystery! Perhaps, as linguist Mark Liberman suggests, SAT grammar questions should be created by a usage panel with a broader view of language and how we (actually) use it.

*For more information*

Lewin, T. 2003. College board corrects itself on test score. *The New York Times*. May 15.

Liberman, M. 2005. The SAT fails a grammar test. *Language Log*. January 31. <http://itre.cis.upenn.edu/~myl/languageblog/archives/001863.html>

Nunberg, G. 2003. The nation: Parts of speech; the bloody crossroads of grammar and politics. *The New York Times*. June 1. <http://query.nytimes.com/gst/fullpage.html?res=9E06E2DC1430F932A35755C0A9659C8B63>

Skinner, D. 2003. The PSAT's genius grant: The Educational Testing Service gets a question wrong and reveals too much of its literary tastes. *The Weekly Standard*. May 15. <http://www.weeklystandard.com/Content/Public/Articles/000/000/002/681xnmqz.asp>



## Adverbs and Adverb Phrases

You may have learned that adverbs modify verbs and that most end in *-ly*, such as *quickly*, *happily*, *enormously*, and so on. Many adverbs do not end in *-ly*, however, and not all adverbs modify only verbs. (And some adjectives end in *-ly* too: *friendly*, *lovely*, *manly*). Here is a short list of adverbs, including many that do not end in *-ly*.

still, never, often, fast, usually, just, perhaps, even, fortunately,  
once, twice, also, forcibly, sometimes

Certain adverb phrases (AdvP), like adjective phrases, can be modified by degree words (Deg). “Manner” adverbs (which can be paraphrased as “in X manner”) can be modified in this way, as the following examples show:

very *dejectedly*  
so *slowly*  
awfully *happily*

Other adverbs can’t be modified by degree words. (As you can see with *awfully*, some degree words are actually degree *adverbs* themselves!)

\*very *once*  
\*so *sometimes*  
\*awfully *yet*

We can now write a phrase structure rule for adverb phrases in which the degree word modifier is optional:

AdvP → (Deg) Adv

RPE 7.7

Unlike adjective phrases, which modify nouns, adverb phrases modify verbs and even entire clauses. They also differ from adjective phrases in that they contribute information about time, manner, reason, place, or cause (among other things).

RPE 7.8

They marched *clockwise* around the field. (manner)  
(modifies verb)

*Luckily*, the beagle ate the dog food before the cat did. (speaker  
attitude)  
(modifies clause)

That dog *always* runs around after he eats. (frequency)  
(modifies verb)

The dishes aren’t done *yet*. (aspect: completion)  
(modifies verb)

### Adverb Phrase Positions

Adverb phrases also have the unique property of occurring in a number of different positions in the sentence. Most adverb phrases can occur at the

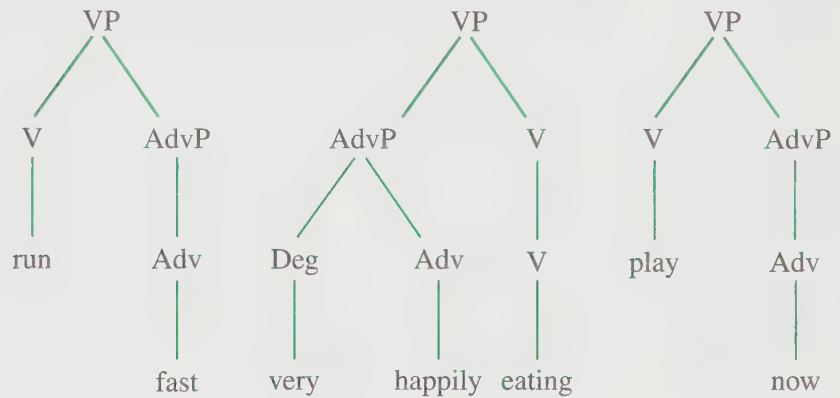
beginning or at the end of the sentence, and many can also appear in positions internal to the sentence.

*Happily/luckily/still*, the beagles like their dog food.

The beagles *happily/luckily/still* like their dog food.

The beagles like their dog food *happily/luckily/still*.

It is perhaps not surprising that adverb phrases can occur in so many positions, given that they modify a variety of phrases in the sentence. Because of the variability of the position of adverb phrases, we will not integrate them into our set of phrase structure rules (though there are ways to accommodate their syntactic behavior within syntactic theory). We'll assume that they can occur almost anywhere, with some restrictions. Here are some basic tree diagrams with AdvP.



## Prepositions and Prepositional Phrases

As we saw in Chapter 5, prepositions seem to be a functional category because they are a closed class; we don't add prepositions to the language. On the other hand, prepositions can have very complex meanings—compare the meanings of *near the table* and *on the table*—and for this reason, prepositions seem to be best categorized as a lexical category.

Syntactically, prepositions (P) are typically followed by NP objects:

*in/on/under/over/around/above* the rocks  
P + NP

Some prepositions, like adverbs and adjectives, can be modified by degree words; the following example has the degree words *right/straight/clear* (there are interesting regional variants: in Alabama, for example, a squirrel can run *slap* up a tree, and in some varieties of American English someone can be *plumb* out of luck).

### hwæt!

Which prepositions are used in certain phrases can vary across dialects. In New York you might wait *on line*, but in other places, you wait *in line*. In Washington (state), you might do something *on accident*, but in other places it's *by accident*.

She ran right/straight/clear *into/on/under/over/around/above* the rock.

Prepositions can also be followed by phrases other than NP. In these examples, P is followed by VP and by another prepositional phrase (PP):

You should never eat before going on a run.  
P + VP

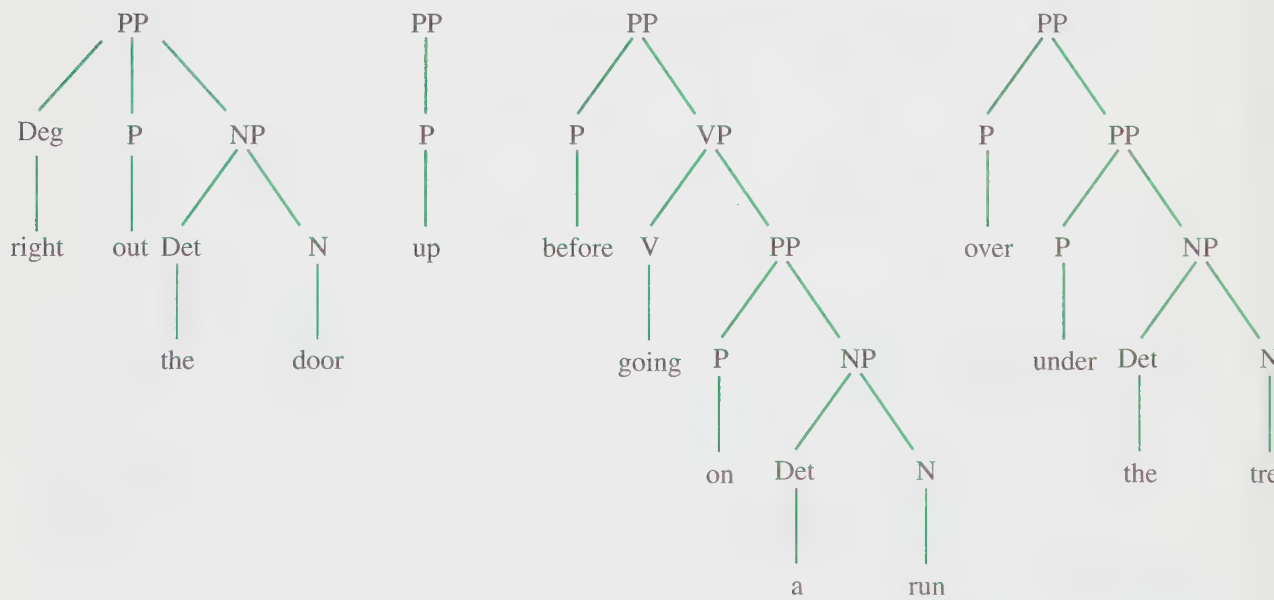
You can see wildflowers growing over under a tree.  
P + PP

We can capture the basic syntax of PP with the following phrase structure rule. As with our rule for VP, we will use XP to indicate a phrase of any category.

PP → (Deg) P (XP)

RPE 7.9

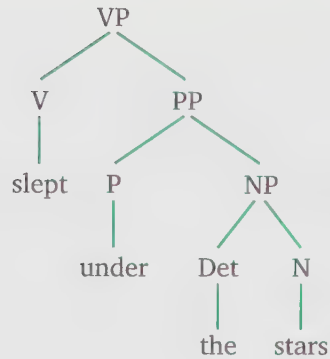
And here are some tree diagrams of PP that we can draw.



Prepositional Phrase Positions

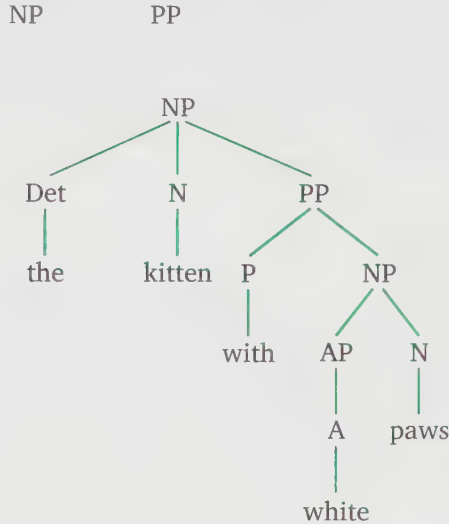
Prepositional phrases can occur in a number of different positions in the clause. They can occur after verbs in a VP:

She [slept [*under the stars*]].  
VP PP



Another common position in which we find PP is in NP, as a modifier of N.

She chose [the kitten [with white paws]].



We need to now revise our rule for NP to include PP modifiers, but this is fairly easy to do. Recall that N can be followed by a postnominal AP, as in *something wicked*. Recall the phrase structure rule for NP that we came up with to account for this:

$NP \rightarrow (Det) (AP) N (AP)$

We can see here that N can also be followed by PP, so we need to revise our phrase structure rule accordingly:

$NP \rightarrow (Det) (AP) N (XP)$

According to the second version of our rule, the modifier that follows N in NP can be AP, PP, or a phrase of another category.



## Did You Know...?



## Syntax in the “Real” World

The language developed for the hit movie *Avatar*, called Na’vi, was created by linguist-turned-businessman Paul Frommer. The language has quite a following and continues to develop with the help of its “speakers.” Frommer developed a syntax for the language modeled on the structure of real languages; Na’vi is a case-marking language, which uses a system much like that found in Basque, Eskimo-Aleut languages, and Panoan languages of South America. Become a follower by visiting Frommer’s blog about the language <http://naviteri.org/> and learn more about the structure of the language at <http://www.learnnavi.org/navi-grammar/>.

Na’vi was not the first language to be developed for a science fiction film. Klingon, the language used in many Star Trek films, was created by linguist Marc Okrand in the 1980s. He has since written two books on Klingon. And noted linguist Victoria Fromkin, who died in 2000, and is perhaps best known for her collection and analysis of slips of the tongue, developed the language Pakuni used by the primate-like creatures on the 1970s TV series “Land of the Lost.”

## Summary of Phrase Structure Rules

We now have phrase structure rules for the syntactic categories introduced in Chapter 5. Once again, remember that these phrase structure rules are just a way of representing some of the basic unconscious knowledge we all have as speakers of English. Here are the basic phrase structure rules we’ve come up with so far.

CL → NP Aux VP

NP → (Det) (AP) N (XP)

Det → *that, ten, some, the*

VP → V (XP)

Aux → (modal) (*have*) (*be*) or (*do*)

AP → (Deg) A

AdvP → (Deg) Adv

PP → (Deg) P (XP)

Deg → *very, so, too, clear, etc.* \*

\*Remember that although we lump them all together here, the members of the category Deg that modify prepositions are a little different from those that modify adjectives or adverbs.

We are now ready to see how we combine phrases into even larger units: clauses and sentences.

## More Clauses

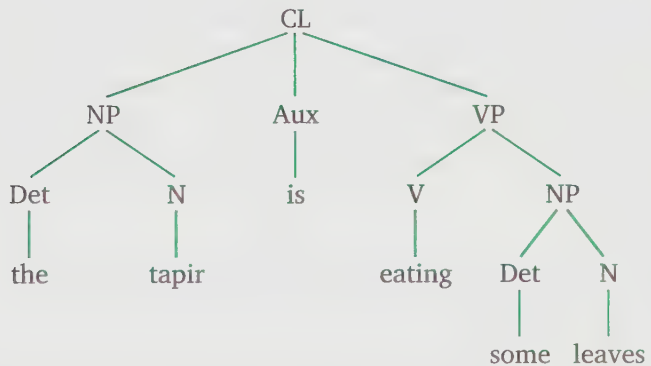
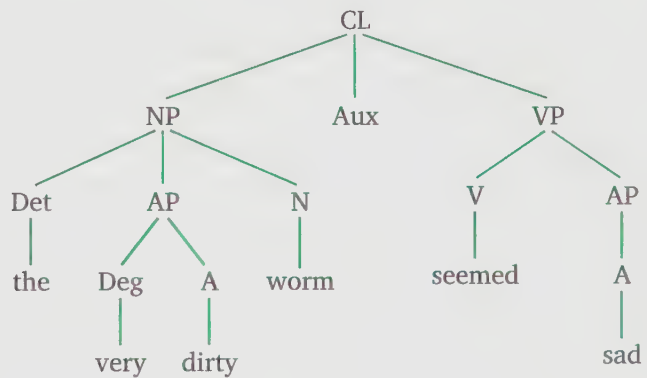
**clause** syntactic phrase made up of at least a subject (NP) and a predicate (VP)

**subject** syntactically, the NP in the clause [NP VP]

**predicate** syntactically, the VP in the clause [NP VP]

In this section, we examine in a bit more detail the syntax of the **clause**. We'll discuss the basic building blocks of the clause, subjects and predicates, and we'll talk about how a clause is different from a sentence. We'll introduce the difference between independent and subordinate clauses to set the stage for a more detailed discussion of the syntax of clauses in Chapter 8.

As we've seen, a clause is made up of NP Aux VP and is the largest syntactic phrase. The NP is the **subject**, and the VP is the **predicate**. Given the phrase structure rules we already know, we can diagram a number of different clauses. Here are two examples.



hwæt!

"All that glitters is not gold." "Love is blind." "He was dead as a doornail." Shakespeare (1564–1623) created these and many other sayings that we see, read, and hear every day.

## Subjects and Predicates

As you may note, the subjects of the above clauses are *the tapir* and *the very dirty worm*. You've probably learned that a subject is the doer of the action or something similar, but not all subjects are agentive in this way. Though we might say this of *the tapir* in the clause just shown (because it is eating the leaves), we can't

really say this of *the very dirty worm* unless we consider *seeming* an action. We can look at other examples and see that subjects of the clauses aren't necessarily agents of an action:

*It is raining.*

*There is a mouse in the hallway.*

*That is simply ridiculous!*

The subjects of these clauses are not even animate, much less agents, so the semantic definition of *subject* (what we might call the logical subject) is very different from the syntactic one. Consider these sentences:

The cat chased the mouse.

The mouse was chased by the cat.

In the first clause, called an *active* sentence, *the cat* is the subject and the agent of the action (chasing). In the second clause, a *passive* sentence, *the cat* is still the chaser and *the mouse* is the chasee, but the NP *the mouse* is in the syntactic subject position. (We discuss passive sentences more in Chapter 8.) This again illustrates that when we talk about the subject of a sentence, we're talking about a syntactic *position*, not about meaning.

#### RPE 7.12

You may have learned in school that the predicate is *what the subject did*. So, in the sentence 'The cat chased the rat', the predicate is what *the cat* (the subject) did, which is *chase the rat*. This definition gets tricky once again because not all subjects are agents of an action, and so the predicate is often difficult to describe in terms of an action performed by the subject. Think about *That is simply ridiculous!* Here, the subject—*that*—isn't *doing* anything, nor can we say that *is ridiculous* describes an action. So, the predicate of a sentence is rather difficult to describe in terms of meaning, but it is fairly simple to describe it syntactically: the predicate is the VP of the clause.

[The cat] [chased the mouse].

subject      predicate

#### RPE 7.13

[The mouse] [was chased by the cat].

subject      predicate

## Independent and Subordinate Clauses

In the following sentence are several clauses, each of which is italicized. The entire sentence is also a clause because it consists of an NP (the subject, *I*) and a very large VP (the predicate, which starts with *think* and ends with *clams*).

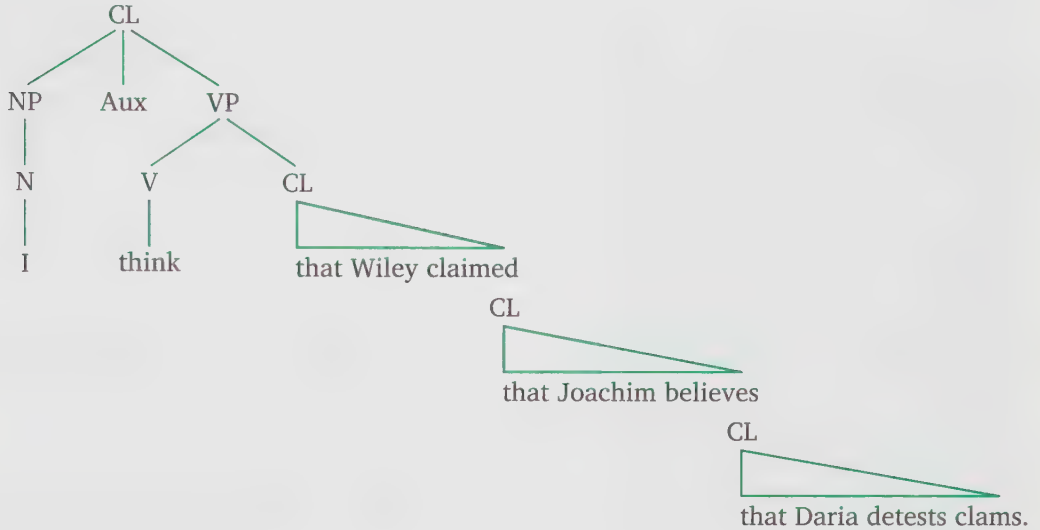
I think [that Wiley claimed [that Joachim believes [that Daria detests clams.]]]

subordinate clause  
clause that is  
contained in  
another constituent

We call a clause that is contained inside another constituent (either another phrase or another clause) a **subordinate clause** (also called a *dependent*

*clause* or an *embedded clause*). All the italicized clauses in the example sentence are subordinate. We've diagrammed this sentence; each subordinate clause is represented by a triangle (a shortcut we'll use rather than draw out each clause in detail).<sup>1</sup>

RPE 7.14



Subordinate clauses come in a variety of types, but all have in common that they consist of a subject and a predicate and that they are contained inside some larger constituent. Here are some examples of different types of subordinate clauses. See if you can pick out the subject and predicate in each.

The teacher thinks *that Mary is very intelligent*.

We wonder *who took the exam*.

The students believe *the teacher to be crazy*.

*That pigs have wings* is a proven fact.

A person *whom I know from work* was on the news yesterday.

**independent clause** clause that is not contained in another constituent

RPE 7.15

The entire (largest) clause is called an **independent clause** because it is not contained inside another constituent.

## What Is a Sentence?

Let's now consider the definition of *sentence*. A clause is a syntactic unit, namely, the unit [NP VP]. A sentence, on the other hand, is more abstract; it

1. As you may have noticed, certain subordinate clauses in English can be optionally introduced by *that*. We will ignore *that* when diagramming clauses, for simplicity.



could be a single clause, two clauses, or much more. A sentence can include any number of clauses (both independent and subordinate) and, when written, can be of any length. Using different types of punctuation (colons, semicolons, dashes), it's possible to string together any number of clauses and call the entire thing a "sentence. Here's a very long sentence that clearly includes many clauses. The whole excerpt is punctuated as a single sentence.

About this time, some rain began to fall, Sancho proposed that they should shelter themselves in the fulling-mill; but, Don Quixote had conceived such abhorrence for it, on account of what was past, that he would by no means set foot within its wall: wherefore, turning to the right-hand, they chanced to fall in with a road different from that in which they had traveled the day before: they had not gone far, when the knight discovered a man riding with something on his head, that glittered like polished gold: and scarce had he descried this phenomenon, when turning to Sancho, "I find," said he, "that every proverb is strictly true; indeed, all of them are apophthegms dictated by experience herself; more especially, that which says, 'Shut one door, and another will soon open': this I mention, because, if last night, fortune shut against us the door we fought to enter, by deceiving us with the fulling-hammers; today, another stands wide open, in proffering to us, another greater and more certain adventure, by which, if I fail to enter, it shall be my own fault, and not imputed to my ignorance of fulling-mills, or the darkness of the night." (Cervantes: 148)

We can easily read this sentence, breaking it down into understandable units (clauses, for example). So, we might say that a sentence is (at least) a clause and sometimes more. A very short sentence, then, could be something like *Leave!* and a very long one could be something like the Cervantes excerpt. In any case, it's clear that there is not a one-to-one correspondence between sentences and clauses, and there is no simple way to define *sentence*, because it seems to be more of an abstraction than a syntactic unit. Table 7.1 contains some definitions of *sentence* that give you some idea of the complexity involved in defining this concept.

We talk more about sentences in Chapter 9, on semantics, and in Chapter 13, on written language. For now, we will leave the definition rather fuzzy and concentrate on clauses rather than the more abstract term *sentence*.



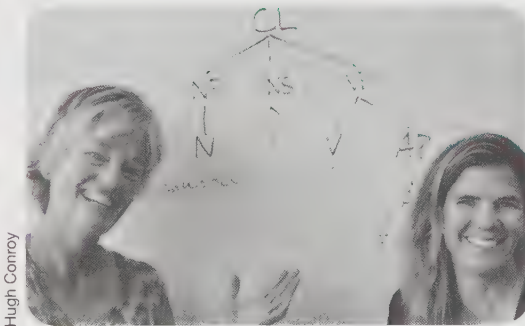
Don Quixote and Sancho Panza after jousting with windmills.

Table 7.1

## Definitions of Sentence

- A string of words satisfying the grammatical rules of a language: "He always spoke in grammatical sentences" (OneLook Dictionary Search: <http://www.onelook.com/cgi-bin/cgiwrap/bware/dofind.cgi?word=sentence>)
- A word, clause, or phrase or a group of clauses or phrases forming a syntactic unit which expresses an assertion, a question, a command, a wish, an exclamation, or the performance of an action, that in writing usually begins with a capital letter and concludes with appropriate end punctuation, and that in speaking is distinguished by characteristic patterns of stress, pitch, and pauses. (<http://www.merriam-webster.com/dictionary/sentence>)
- A series of words in connected speech or writing, forming the grammatically complete expression of a single thought; in popular use often such a portion of a composition or utterance as extends from one full stop to another. (Oxford English Dictionary Online. <http://www.oed.com>.)
- In linguistics, a sentence is a unit of language, characterized in most languages by the presence of a finite verb. For example, "The quick brown fox jumps over the lazy dog." (<http://en.wikipedia.org/wiki/Sentence>)

## Accent on Teaching with Trees



Hugh Conroy

You probably know many traditional grammar rules whether you stick to them or not. They include rules that tell you where to place punctuation marks, when to use *whom* rather than *who*, not to say *ain't* and *I don't know nobody*, and to watch your spelling (don't mix up *they're*, *there*, and *their*). You might have had to diagram sentences, too.

A growing number of linguists (including us; see photo) are collaborating with teachers to improve teaching about language in the schools. Their goals include using students' intuitive

knowledge of grammar to learn about reading and writing, encouraging students to investigate language itself, and creatively using technology to make it real and include all students.

One teacher using linguistics and technology in the classroom is Beth Keyser, who uses tree diagrams to teach her seventh-graders about language. Rather than relying on traditional definitions (e.g., a noun is a person, place, or thing), Keyser teaches parts of speech by encouraging students to investigate the morphological, syntactic, and semantic properties of words (e.g., nouns follow words such as *the*, *some*, and *a/an*). Diagramming sentences helps her students learn more about phrases and categories and also helps them discover on their own such things as the difference between transitive and intransitive verbs. Through an ingenious use of *smartboard* technology, Keyser's students first diagram simple sentences with intransitive verbs (*the boy laughed*). Parts of speech are color coded. Once students are independently able to create sentences with intransitive verbs,

students move on to sentences with transitive verbs (e.g., *ate* in *the boy ate the apple*), discovering that transitive verbs differ from intransitive ones in having a relationship to another phrase (namely, NP) in the tree. Other exercises that Keyser does with her students include exploring the difference between prepositions and particles (*the girl ran up a big hill* versus *the girl ran up a big bill*) and discovering how adverbs can occur at the edges of most phrases but not inside them (*up the tree quickly* but not *up quickly the tree*, for example).

Keyser (2008) observes that having students diagram sentences this way levels the academic playing field. All students (without language disorders) can recognize units of language. Work such as Keyser's moves education about language away from traditional, rote rules to exploration and discovery and focuses not on what students

need to learn about grammar but on what they already know!

*For more information*

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## Summary

In this chapter, we have explored the basic elements of phrase structure and introduced phrase structure rules as a way to illustrate syntactic structure and some important generalizations about it. We have seen that heads combine with other words to form phrases (NP, VP, AP, etc.), and that there are various syntactic “tests” we can use to determine the categories of words, even nonsense words. We’ve examined the English verb system in some detail and investigated the syntactic distinction between main verbs and auxiliary verbs, including the syntax of pleonastic *do*, all of which suggests that the Aux position in English is separate from VP and obligatory in tensed clauses, even if it seems to be “empty.” We’ve explored the basic phrase structure of the clause, the largest syntactic phrase, and discussed how clauses can be independent or subordinate and how they differ from sentences.

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## Review, Practice, and Explore

### RPE 7.1

### Nouns and Noun Phrases

Find all the nouns in the following excerpt. Identify any members of the category Det (as we've defined it here, to include determiners, numerals, and quantifiers) that introduce each noun. There may be other words that precede the noun too. See if you can tell what they are, if they are not members of the category Det.



Lyra and her dæmon moved through the darkening hall, taking care to keep to one side, out of sight of the kitchen. The three great tables that ran the length of the hall were laid already, the silver and the glass catching what little light there was . . . The places here were laid with gold, not silver, and the fourteen seats were not oak benches but mahogany chairs with velvet cushions. (Pullman 1995: 3)

Can you identify four NPs in this excerpt? List them and underline the head noun of each.

## RPE 7.2 Verbs and Verb Phrases

Write out the following sentences, and circle all the main verbs in each. Underline auxiliary verbs and modals.

- I might never have seen you if you had not taken this class.
- Who are you buying that magazine for?
- Shakespeare wrote many plays and would have written more if he had lived longer.
- You always seem to be happy about something.
- Were they with you on the trip?
- Ned must leave before he gets into trouble.

## RPE 7.3 More Verbs and Verb Phrases

In a text of your choice, find examples of verb phrases that conform to each of the following patterns. Write out each of your example sentences, and label each verbal element.

- modal + *have* + *be* + main verb
- have* + main verb
- have* + *be* + main verb
- modal + *be* + main verb
- be* + main verb
- main verb (no auxiliaries or modals)

## RPE 7.4 The Verbs *Have* and *Be*

This section looks at a number of ways that auxiliary verbs differ from main verbs. Many of our examples have included *have* and *be* as auxiliary verbs.

- A. Consider the following data, and then try to answer the questions below.

Lucinda *has* a ferret.

Lorenzo *is* obnoxious.

- What is the main verb in each sentence? On what do you base your conclusion?
- What happens when you apply SAI?
- What happens when you negate the sentences or form tag questions?
- Do *have* and *be* in these sentences behave in exactly the same way? If not, how are they different? (*Hint*: The difference has to do with *do* insertion.)
- Are *have* and *be* in these sentences main or auxiliary verbs? Why?

**B.** Now consider the following sentences.

Lucinda *has had* a ferret.

Lorenzo *is being* obnoxious.

What is the main verb in each of these sentences? What is the auxiliary verb?

**C.** Finally, consider the following sentences.

Baa, baa, black sheep, have you any wool?

Has Mary a new car?

These sentences probably sound odd to speakers of U.S. English, but they are natural for most speakers of contemporary British English and some varieties of Canadian English.

Can you explain how this use of *have* differs from U.S. English *have*, based on these data?

RPE

7.5

### Which *Do Is It?* Main Verb or Auxiliary?

Each of the following sentences includes some form of the verb *do*. Using the tools of analysis in the chapter, identify each form of *do* as pleonastic (“dummy”) auxiliary *do* or as main verb *do*. (Note: Some sentences may have both, so be careful!) Explain why you label each *do* the way you do, and give any relevant examples (of SAI, tag question formation, and negation) to support your hypotheses.

- a. I never could do yoga!
- b. Did you get a new puppy?
- c. I didn’t do it!
- d. You ate my dessert!  
I did not!
- e. You ate my dessert.  
Yes, I did eat your dessert.
- f. I don’t do dessert.
- g. Just do the job, will you?

RPE

7.6

### Finding Adjective Phrases

The following text excerpt contains several adjective phrases. (Remember, a phrase, as we’ve defined it, consists minimally of a head but can include other material.) So, *tall* can be an adjective phrase (AP) but so can *very tall*.

- a. List at least five adjective phrases that you find in the excerpt.
- b. List two noun phrases from the excerpt that include prenominal adjective phrase modifiers.

I had never seen Sanaz without her uniform, and stood there almost transfixed as she took off her robe and scarf. She was wearing an orange T-shirt tucked into tight jeans and brown boots, yet the most radical transformation was the mass of shimmering dark brown hair that now framed her face. She shook her magnificent hair from side to side, a gesture that I later noticed was a habit with her; she would toss her head and run her fingers through her hair every once in a while, as if making sure that her most prized possession was still there. (Nafisi 2003: 16)

**RPE 7.7** Adverb Phrases

The following is a (very uninteresting) text that includes no adverb phrases.

I was sitting at my desk, staring out the window. A car raced by and I wondered where it was heading. A police car sped by. A child riding her bike down the street stopped to watch the exciting chase.

Add at least six adverb phrases to the text to make it more interesting and descriptive. (To make this a little more challenging, use only three adverbs that end in *-ly*.) How do the adverb phrases change the text? What information do they add?

**RPE 7.8** Not all *-ly* Words are Created Equal(*ly*)

As we mentioned in the text, some adverbs have *-ly* endings, and some don't. We also mentioned that some adjectives also end in *-ly*. You can tell *-ly* adjectives and *-ly* adverbs apart based on the category of word they attach to. What category does *-ly* attach to to form adjectives? What category does it attach to to form adverbs?

Adjectives	Adverbs
knightly	happily
manly	softly
friendly	possibly
lovely	obviously

**RPE 7.9** Finding Prepositional Phrases

Try to find all the prepositional phrases in the following poem, “Of Mere Being” by Wallace Stevens.

The palm at the end of the mind,  
Beyond the last thought, rises  
In the bronze decor,

A gold-feathered bird  
Sings in the palm, without human meaning,  
Without human feeling, a foreign song.

You know then that it is not the reason  
That makes us happy or unhappy.  
The bird sings. Its feathers shine.

The palm stands on the edge of space.  
The wind moves slowly in the branches.  
The bird's fire-fangled feathers dangle down.

(“Of Mere Being,” from *Opus Posthumous* by Wallace Stevens, edited by Milton J.

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Can you find a PP that modifies a noun? What kinds of information do the PPs add to the poem?

### RPE 7.10 Nouns, Verbs, or Adjectives?

We've seen that the position of a word can help us identify its syntactic category. For example, if we say *Mary is walking*, we identify *walking* as a verb because of its position after the auxiliary verb *is*. In the sentence *Brisk walking is good for you*, we identify *walking* as a noun. Here, it is modified by an adjective, *brisk*, and occurs in the subject position of the sentence, a position in which we often find NPs. Using the tools introduced in the chapter to help you identify the syntactic category of a word, label the category of each of the following italicized words. Explain your answers by showing how the word behaves morphologically and syntactically like other words in a particular category (such as the position in which the word occurs or whether the word can take affixes).

- Horatio was very *disappointed* when he found out that he couldn't *father* children.
- A very conscientious *father*, Horatio tried not to *disappoint* his children by missing their birthdays.
- Loudly *playing* the drums is Horatio's only means of relaxation.
- Horatio was *playing* the drums when the hurricane hit.
- Loud *playing* of drums disturbs the neighbors.
- Those *annoying* drums should be off limits to people like Horatio.
- We should *videotape* Horatio *playing* the drums.
- We could get a lot of money on eBay for that *videotape*.

### RPE 7.11 Jabberwocky Syntax

Following are a few stanzas from the nonsense poem "Jabberwocky" by Lewis Carroll.

- Choose six nonsense words in the poem, and label them N, V, P, A, or Adv. Explain why you labeled them as you did and what syntactic (and other) evidence you used.
- Find six function words in the poem. How do they contribute to the meaning of the poem and help you make sense of it?
- What clues, other than grammatical ones, help you derive meaning from the poem? Can you tell what's going on? On what do you base your interpretation?

"Beware the Jabberwock, my son!  
The jaws that bite, the claws that catch!  
Beware the Jubjub bird, and shun  
The frumious Bandersnatch!"

He took his vorpal sword in hand:  
Long time the manxome foe he sought—  
So rested he by the Tumtum tree,  
And stood awhile in thought.

And, as in uffish thought he stood,  
The Jabberwock, with eyes of flame,  
Came whiffing through the tulgey wood,  
And burbled as it came!



One, two! One, two! And through and through  
 The vorpal blade went snicker-snack!  
 He left it dead, and with its head  
 He went galumphing back.

### RPE 7.12 A Test for Subjects

In school, you learn different ways to identify the subject of a sentence. As we've mentioned, one is to identify the doer of the action, but this semantic definition is problematic in that although it may help you identify the *logical* subject of the sentence, it may not help you identify the *syntactic* subject of the sentence, the NP in the subject position. There is a very good test for syntactic subjects, however, namely, the rule of subject-auxiliary inversion. SAI has the effect of inverting or moving the modal or auxiliary verb over the subject to sentence-initial position to form a question to which the answer would be *yes* or *no*.

*The grizzly bear population in Yellowstone National Park* is dwindling rapidly.

*Is the grizzly bear population in Yellowstone National Park* dwindling rapidly? (SAI)

Here, the auxiliary verb *is* has moved not over a single noun but over the entire NP, *the grizzly bear population in Yellowstone National Park*, the subject NP.

Another test for the subject is tag question formation. Only subjects and auxiliary verbs (and modals) occur in tags.

*The spider crept up the wall.*

*The spider crept up the wall, didn't it?* (tag question formation)

it = the spider (subject)

Using these two tests, find the subjects in the following sentences. What is interesting about the subjects you find? Are they what you expect?

- The shadow crept up the wall.
- There were six linguists at the lecture.
- It is very hot outside.
- The giant chased Jack.
- Jack was chased by the giant.

### RPE 7.13 Diagramming Clauses

A. Diagram the clause *The wind is rocking the boat*, and answer the following questions.

- What are the constituents of the subject NP?
- What are the constituents of the VP (the predicate)?

B. Diagram the following clauses for practice.

- Several important dignitaries are visiting.
- The audience clapped for the actors.
- Hortense seems depressed.
- Two ducks with yellow beaks will eat the stale bread.

**RPE 7.14** Subordinate Clauses

Find the subordinate clauses in each of the following independent clauses. (*Hint:* Subordinate clauses can occur in various positions.)

- a. Lucinda thinks that ferrets are excellent pets.
- b. That ferrets can be smelly doesn't bother Lucinda.
- c. I wonder whether Lucinda likes ferrets.
- d. My friend met the woman who likes ferrets.
- e. I never believed that Lucinda knew that ferrets made good pets.

**RPE 7.15** Diagramming Practice

We've repeated our set of phrase structure rules below, along with some sentences to diagram for more practice.

CL → NP Aux VP

NP → (Det) (AP) N (XP)

Det → *that, ten, some, the*

VP → V (XP)

Aux → (modal) (*have*) (*be*) or (*do*)

AP → (Deg) A

AdvP → (Deg) Adv

PP → (Deg) P (XP)

Deg → *very, so, too, clear*, etc.

- a. The schnauzer was eating his food.
- b. Seven chickens scurried under the porch.
- c. Children can be very loud.
- d. Elizabeth ate apples.
- e. Those students headed right out the door.
- f. Each person remained quite calm.
- g. The fly on the wall is cleaning his wings.
- h. The six hungry boys walked to the market on the corner.
- i. Cats with long tails sauntered along the fence.



## Chapter at a Glance

**Hierarchical Structure and Ambiguity**

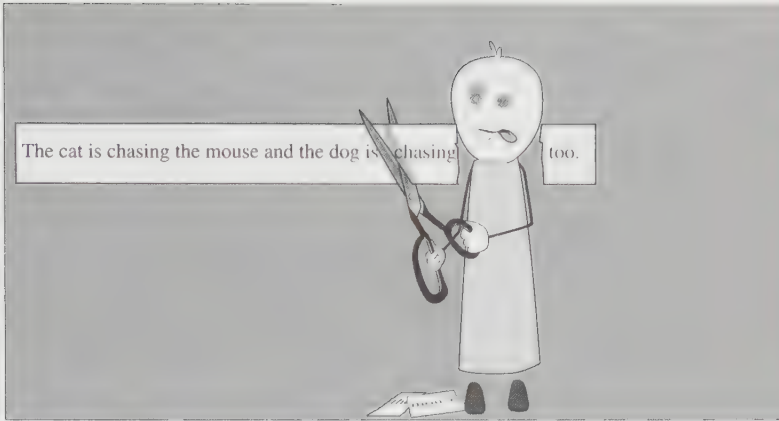
- Ambiguity
- Recursion

**Silent Syntax****Evidence for Phrases and Clauses**

- Substitution
- Pronoun Reference
- Conjunctions and Coordination

**Movement and Deletion**

- Deep and Surface Structure
- Deletion Rules
- Reordering Phrases: Movement

**Summary****Sources and Resources****Review, Practice, and Explore**

# Syntax: Phrase Structure and Syntactic Rules

## Key Concepts

- Phrase structure is recursive, which allows infinitely long phrases and sentences.
- Our unconscious knowledge of syntax includes the ability to interpret ambiguous sentences and unpronounced, yet understood, phrases.
- That we know how to relate pronouns to their antecedents provides evidence for our knowledge of clauses and the boundaries between them.
- That we know how phrases can be moved, coordinated, and deleted within the clause provides evidence for syntactic structure and the rules that apply to it.

## Did You Know . . . ?

Who Are *They*, Anyway?

"Does She . . . or Doesn't She?"

Passive Should Be Avoided?

## Language Alive! Silent Pronoun?

Pronouns, Prestige, and Illogical Rules

Sex and Syntax

## Linguistics in the News Starling Syntax?

## Accent on Psycholinguists



*A word after a word after a word is power.*

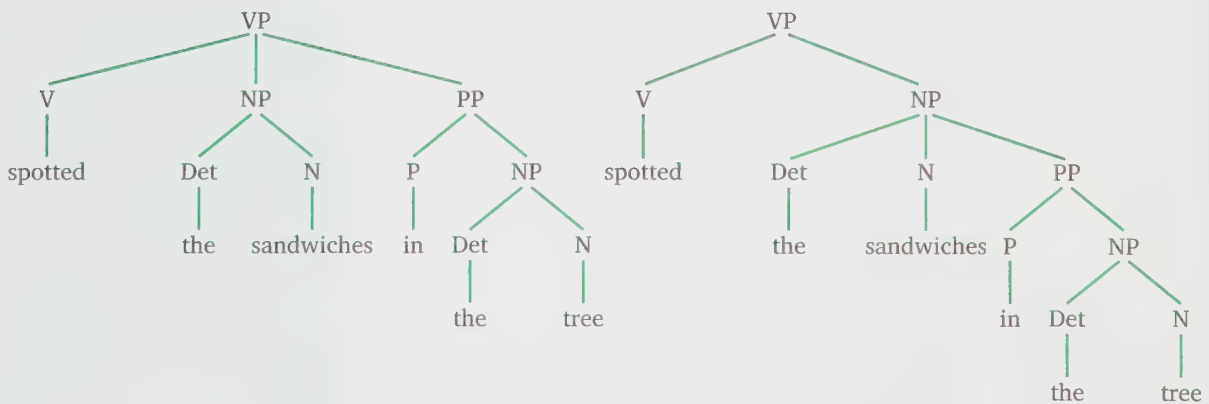
—MARGARET ATWOOD

In the previous chapter, we explored the basic structure of phrases and clauses, and we introduced phrase structure rules, the notation we use to graphically represent syntactic structure. In this chapter, we investigate additional properties of phrase structure, and we also take a look at some other syntactic phenomena. We'll examine the evidence for phrases and phrase structure and discover that our knowledge of syntax includes a complex understanding of how to interpret, reorder, and even omit material in a sentence. We'll go beyond phrase structure to discuss a variety of syntactic rules that apply to phrases.

To preview some of the syntactic puzzles we will discuss in this chapter, consider the following sentence:

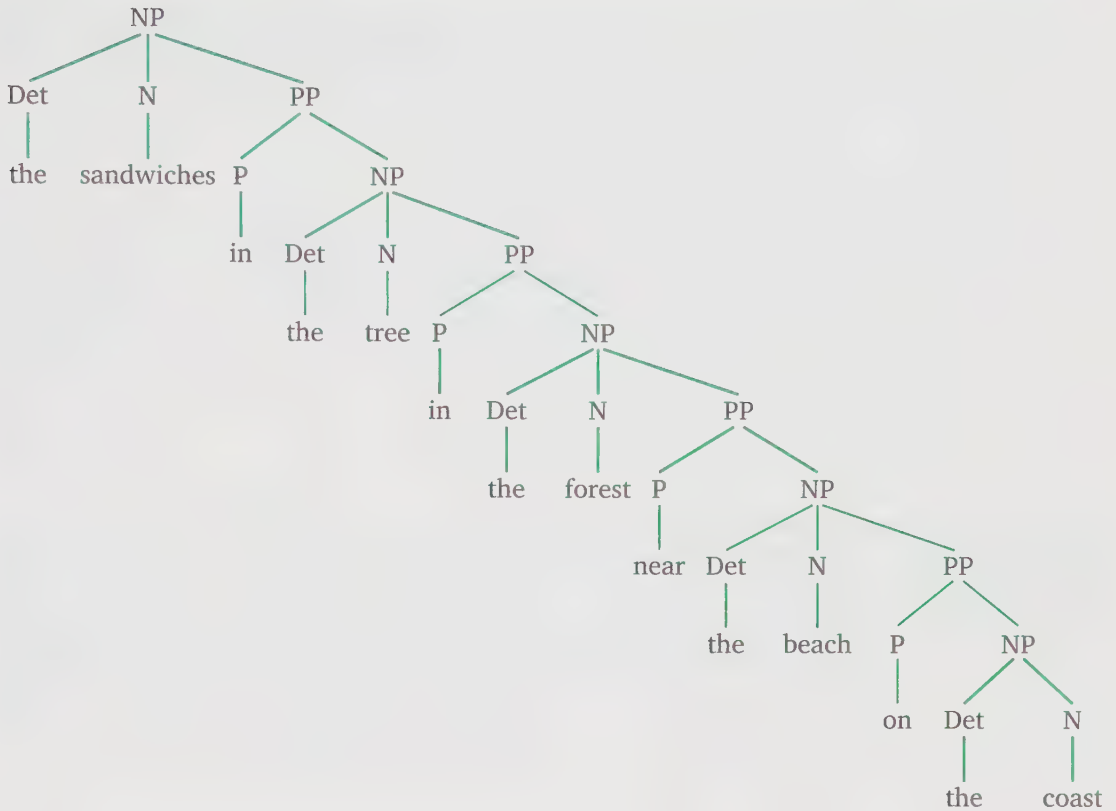
Six hungry gorillas spotted the sandwiches *in the tree*.

Who spotted what where? We understand this sentence to mean that *in the tree* is where the gorillas spotted the sandwiches, or that the sandwiches in the tree are the ones the gorillas spotted (maybe while sitting under the tree). How do we know this? It turns out that this sentence has two possible structures, one for each meaning.



Phrase structure helps us explain how we understand *ambiguity*—when a sentence, phrase, or word has more than one meaning.

Our phrase structure rules also allow us to draw this (very long) NP.



We could make this NP even longer; phrase structure rules allow unlimited extension (even though our memories might not). We'll talk about this property, called *recursion*, in this chapter. We'll also talk about how we understand the meaning of this sentence:

Mary loves her children, and so does Sue.

We understand that Sue loves either Mary's children or her own; how do we know that? And consider the following sentence:

Lee thinks that Cary loves her.

Why can the pronoun *her* refer to *Lee* but not to *Cary*? And why, in the following sentence, can the pronoun *herself* refer only to *Cary*?

Lee thinks that Cary loves herself.

What do we know about the structure of these sentences that allows us to distinguish between these meanings?

Finally, we'll look at a variety of syntactic puzzles that involve moving phrases around in ways that are governed by a complex system of rules.

For example, we know we can transform the following *active* sentence into a *passive* sentence by simply reordering *Beowulf* and *Grendel* and changing the form of the verb:

*Beowulf* killed *Grendel*. (active)  
*Grendel* was killed by *Beowulf*. (passive)

But we can't form a passive sentence from the following sentence, where we've replaced the verb *kill* with *resemble*:

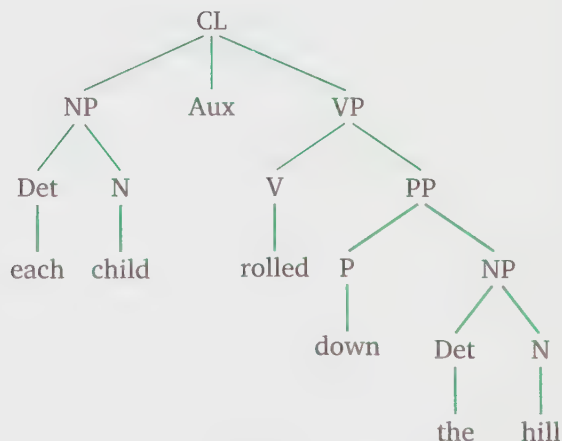
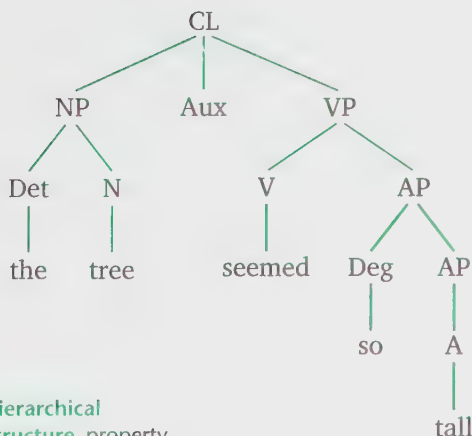
*Beowulf* resembled *Grendel*.  
 \**Grendel* was resembled by *Beowulf*.

Why not? Read on, and you'll find out!

## Hierarchical Structure and Ambiguity

So far, we've illustrated the order of constituents in a particular phrase (phrase structure) with tree diagrams, and we've labeled heads and phrases. We've also seen that one phrase can contain, or *dominate*, another. For example, a clause (CL) dominates a noun phrase (NP) and a verb phrase (VP), as the tree diagrams for the following two sentences illustrate:

The tree seemed so tall.  
 Each child rolled down the hill.



**hierarchical structure** property of phrase structure whereby one phrase is contained inside another: one phrase dominates another phrase

The tree diagrams illustrate **hierarchical structure**; one phrase dominates another. In addition to CL dominating NP, Aux, and VP, VP dominates V and AP in one sentence and V and PP in the other, and so on.

## Ambiguity

Consider the following sentence:

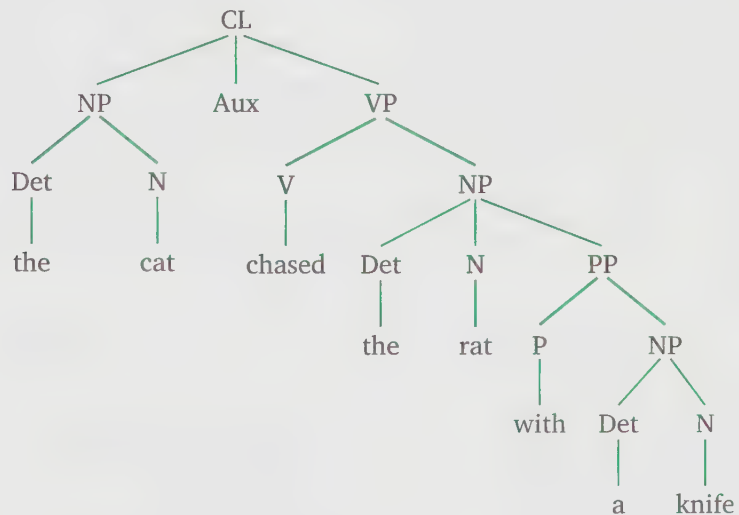
Templeton is a rat.

This sentence is ambiguous; it has more than one meaning. Templeton can be either a furry rodent or an unsavory person. This kind of ambiguity is called **lexical ambiguity**: a sentence is ambiguous because a word—here, the noun *rat*—has more than one meaning.

Now consider this sentence:

The cat chased the rat with a knife.

This sentence is ambiguous; who has the knife, the cat or the *rat*? Let's assume that none of the words in the sentence is ambiguous: the cat is a furry feline, and the rat is a rodent. Two tree diagrams can illustrate the ambiguity, and we call this kind of ambiguity a **syntactic ambiguity**. One possible structure is the following, where the PP *with a knife* is dominated by NP and modifies the noun *rat*:

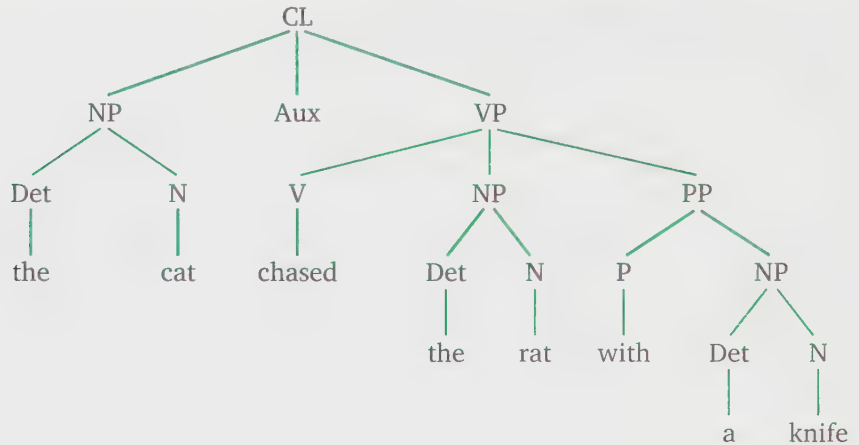


And here is the other, where the PP is in a completely different position. It is a constituent of the VP and modifies the verb *chased*. (Notice that this tree does not conform to the simple phrase structure rules we discussed in Chapter 7. Can you tell why not?)

**lexical ambiguity**  
word that has more  
than one meaning

**syntactic ambiguity**  
clause or phrase  
has more than one  
meaning because it  
has more than one  
syntactic structure





The tree diagrams here are one way of graphically representing the hierarchical structure that is a part of human language. Understanding that language has hierarchical structure allows us to explain, among other things, why certain sentences are ambiguous, even though they have no ambiguous words. They are syntactically ambiguous; the sentences have more than one possible structure.

### RPE 8.1

## Recursion

Recall from the previous chapter that clauses can contain other clauses, a property called *subordination*. Take, for example, the independent clause (from Chapter 7) that contains a number of subordinate clauses:

I think *that Wiley claimed that Joachim believes that Daria detests clams.*  
                   *that Joachim believes that Daria detests clams.*  
                   *that Daria detests clams.*

We can keep make this independent clause even longer by adding more subordinate clauses:

I think *that Sue hopes*  
                   *that Pat said*  
                   *that Wiley claimed*  
                   *that Joachim believes*  
                   *that Daria detests clams.*

### hwæt!

Recursion is also an essential tool in computer science, used to break down and build very complex algorithms. A recursive function can repeat itself an infinite number of times.

Even though this independent clause is grammatical, it's awkwardly long. It could be even longer, though; you can imagine how to add onto this clause even more than we have here. If we ever heard someone utter such a long clause, we'd probably

lose our train of thought (or get bored or lose interest). This is because of the difference between our linguistic *competence*, our unconscious knowledge of language (which includes recursive rules), and our linguistic *performance*, our actual language use in a given situation. We certainly have the ability to produce sentences of infinite length, but we don't because our memories can only process so much before we get confused.

**recursion** property that allows phrase structure rules to generate phrases of infinite length

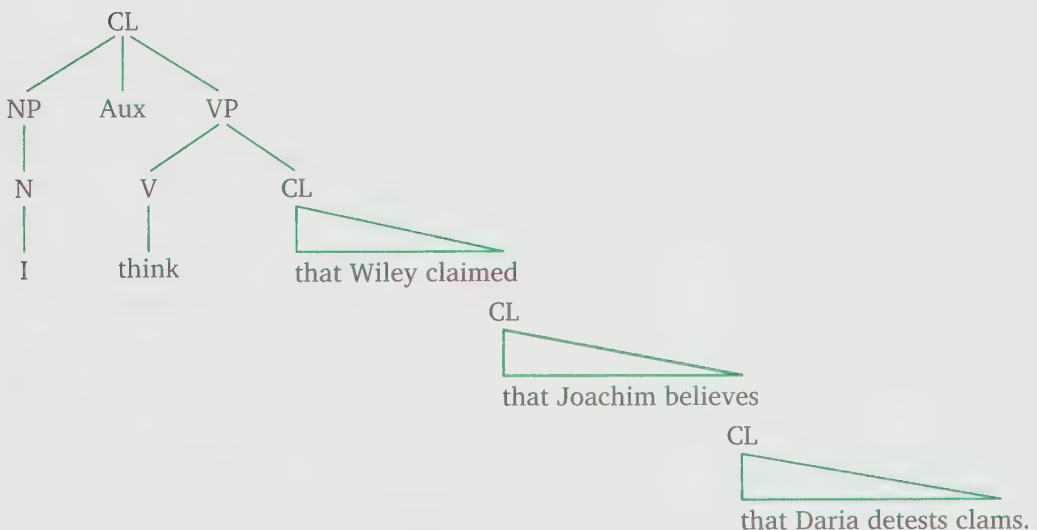
The grammatical property of unlimited extension of phrases is called **recursion**. Recursion is what makes subordination (generating a clause within a clause) possible. More technically, we can say that our phrase structure rule for the clause is a recursive rule. Let's look at why, beginning with the rule itself.

$CL \rightarrow NP \text{ AUX VP}$

Recall that the rule for VP is

$VP \rightarrow V (XP)$

Suppose that XP in VP is a clause (CL). Then the phrase structure rule for CL would allow for a VP that dominates a clause that dominates a VP that dominates a clause—you get the idea. The tree diagram for this sentence is given here, and it shows how a CL can include another CL, which can include another CL, and so on. (The rule for CL is recursive, and the rule for VP is, too; can you explain why?)

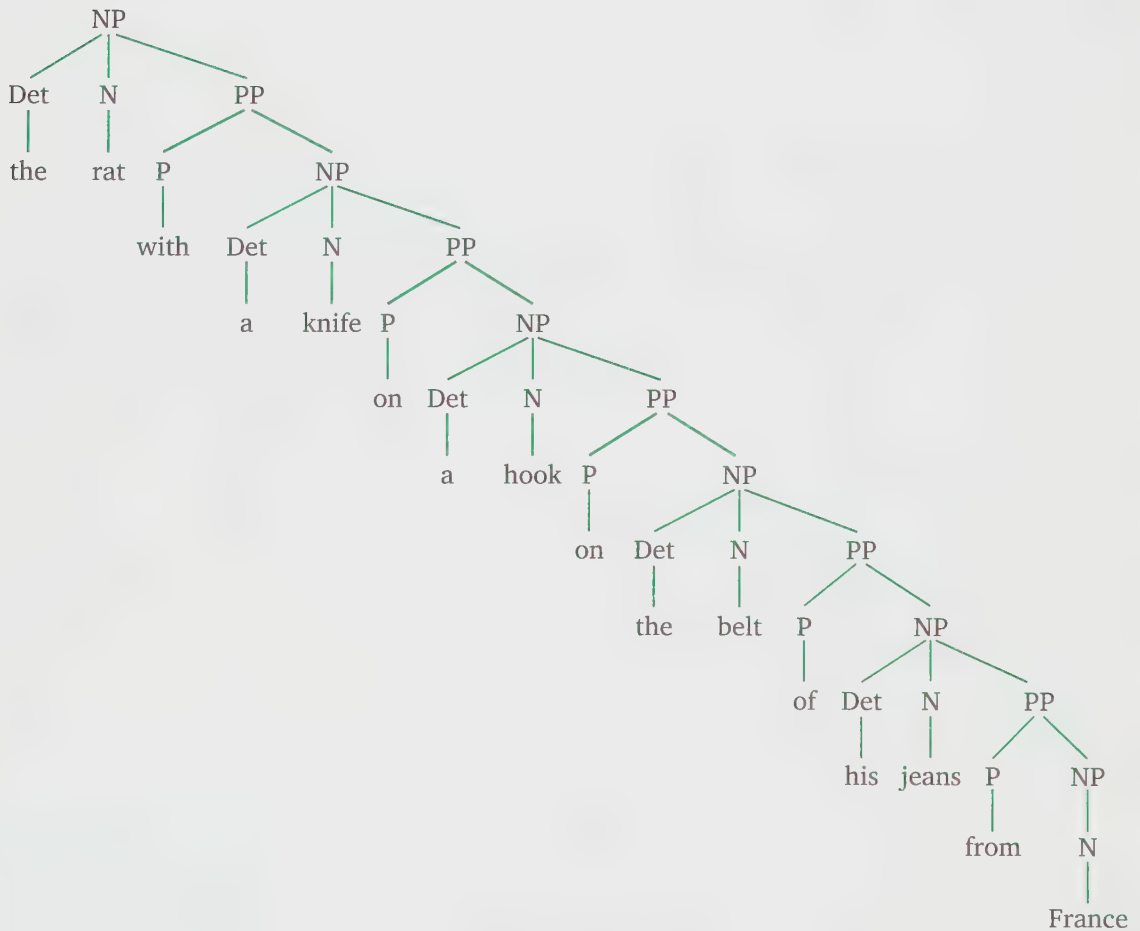


The rule for NP is also recursive. This is because NP includes a possible PP (the XP in the phrase structure rule for NP), which can include another NP (the XP in the phrase structure rule for PP), which can include a PP, which can include an NP, and so on.

NP  $\rightarrow$  (Det) (AP) N (XP)

PP  $\rightarrow$  (Deg) P (XP)

Recursion explains why we can have NPs that are relatively short, such as *the rat* or *the rat with the knife*, but we can also generate very long ones, such as



This diagram illustrates that it is possible (indeed, quite common) for one NP to dominate another NP. This means that an NP could (in theory) go on forever, which is why we could (in theory) produce NPs of infinite length!

The evidence that our mental grammar includes recursive phrase structure rules helps explain why we can generate clauses of great complexity and length quite effortlessly. This is one reason why we call grammar generative; it is a system that allows us to produce, or generate, very complex units of language.

RPE 8.2

LINGUISTICS  
IN THE NEWS

## Starling Syntax?

Many people delight in recognizing a bird by its song. A robin sings the robin song, and a blackbird sings like a blackbird. Birds sing the songs they're programmed to sing, and that's it, right? Well, some scientists think that birds might know more than we think they do and that birds might even understand recursion.

Hauser, Chomsky, and Fitch (2002) argue that recursion is unique to human language. Fitch and Hauser created a way to test whether humans understand recursion by using sounds. They came up with a "language" with only two categories of words: short sounds, such as *mo* and *li*, made by men, and the same sounds, made by women. The male and female were distinguished by voice pitch. They created sentences in which sounds were combined in ways that did not involve recursion (so, the sentence pattern might involve male sounds, A, following female sounds, B: ABAB) and sentences that did involve recursion, by embedding a female-male sound pair within another pair, A-AB-B. Humans can figure out

both patterns easily, but tamarin monkeys could figure out only ABAB.

Gentner and colleagues (2006) tried this sound-pattern recognition experiment on male starlings. They created artificial starling songs that followed the ABAB and AABB patterns and then attempted to train starlings by having them listen to the songs. After 40,000 tries, nine of eleven starlings recognized the AABB pattern.

Some scientists have concluded that the starlings' ability to recognize the pattern means that recursion might be part of birds' evolutionary history, too. Chomsky and other linguists remain skeptical, suggesting that the birds were using other criteria (relying on numbers of sounds to recognize a pattern) and that recognizing the pattern may involve short-term memory rather than any real ability to recognize recursion.

Another key difference from human language is that the new patterns for the starlings still had the same meaning, just a different sound. Humans can think of endless pickup lines, but for birds,

as Hauser put it, "It's still, 'I'm Fred, I'm a male.' "

Hauser, Chomsky, and Fitch's work has sparked a debate among linguists about what is unique to human language. (Is it only recursion? What about other aspects of grammar and speech perception and the vocal tract?) It has also sparked great interest among scientists about the ability of other species to recognize sound patterns and what this means about the ingredients and origins of language.

### For more information

Gentner, T., et al. 2006. Recursive syntactic pattern learning by songbirds. *Nature* 440. 1204–1207.

Hauser, M., N. Chomsky, & W. Fitch. 2002. The faculty of language: What is it, who has it, and how did it evolve? *Science* 298(5598). 1569–1579.

Zimmer, C. 2006. Starlings' listening skills may shed light on language evolution. *The New York Times*. May 2.

To read about the linguists' arguments, go to <http://itre.cis.upenn.edu/~myl/languageblog/archives/002422.html>



## Silent Syntax

Not all syntactic ambiguity can be explained in terms of hierarchical structure. Other ambiguities arise in sentences in which material is missing but nevertheless understood. Phrase structure again helps us explain why we understand such sentences the way we do.

The following sentence is ambiguous, but not because there are two possible positions for a PP modifier:

The crab is too hot to eat.

Do you understand the sentence as having two meanings? There are no lexical ambiguities here; the noun *crab*, whether the living creature or your dinner, has the same meaning; *hot* indicates temperature, and *eat* means *consume*. In syntactic terms, the ambiguity can be stated in this way: Who or what is the subject of *eat*—the crab or someone else? And who or what is the **complement** of *eat*—crab food or the crab itself? Complements are phrases that combine with heads to form (or “complete”) a larger phrase. So, *eat* is a verb that typically is followed by an NP complement (because we typically eat *something*). Here, the complement is understood but not overt or pronounced.

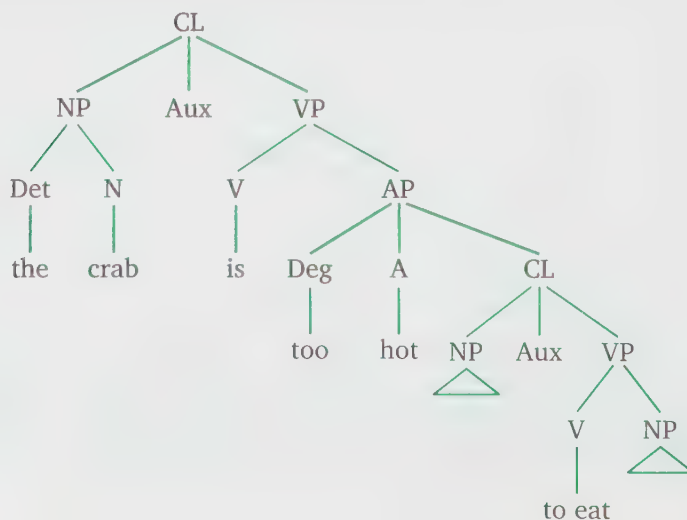
What all this boils down to is that in order to interpret this sentence, we must assume that there is an unpronounced subject of the (infinitival) verb *eat* and also an unpronounced complement of that verb. These two “invisible” NPs are represented by the delta symbol,  $\Delta$ .

The crab is too hot [ $\Delta$  to eat  $\Delta$ ].

The crab is too hot (*for someone*) to eat (*the crab*).

The crab is too hot (*for the crab*) to eat (*something*).

We explain the syntactic ambiguity of this sentence by proposing not that the sentence could have two different structures but that there is an “understood” or “silent” subject of *eat* and also a silent complement of *eat*.



**complement**  
phrase that  
combines with a  
head to form a  
larger phrase

**silent syntax**

unpronounced yet  
understood syn-  
tactic material in  
sentences

The two silent syntactic positions in this tree diagram can be interpreted in two ways (as the crab or as someone else). If there were no such understood positions, we wouldn't be able to explain why the sentence has more than one meaning.

To further convince you of the existence of **silent syntax**, or structure that is somehow there but unpronounced, consider some more examples:

Julio is easy to please.

Julio is eager to please.

Once again, we have sentences that look exactly the same in terms of word order and differ only in the adjective phrases *easy* and *eager*. We interpret these sentences quite differently, however, as illustrated here:

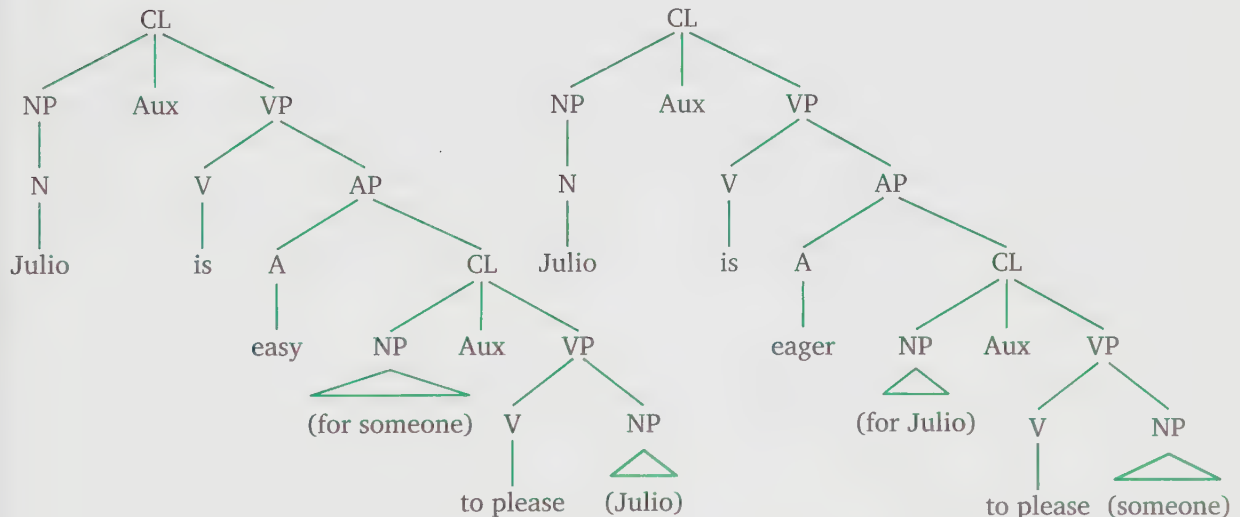
Julio is easy [ $\Delta$  to please  $\Delta$ ].

Julio is easy (*for someone*) to please (*Julio*).

Julio is eager [ $\Delta$  to please  $\Delta$ ].

Julio is eager (*for Julio*) to please (*someone*).

We can't explain the different interpretations of these sentences unless we propose that they include phrase structure that we understand to be there, even though those understood elements are not pronounced.



You may have noticed that we have diagrammed the clause here with an Aux node, even though the clause is not tensed (it is an infinitive). There is actually quite a bit of evidence that the Aux node exists in infinitival clauses as well as in tensed clauses, and it may even be the case that *to* is in Aux, rather than in V.

As we can see from the properties of phrase structure, there is a great deal of evidence that our knowledge of phrase structure is quite complex. This knowledge is not at all obvious, particularly in our representations of sentences in writing as linear strings of words rather than as (recursive) phrases with hierarchical structure and understood, yet unpronounced, structure.

## RPE 8.3

## Evidence for Phrases and Clauses

So far, we've relied mainly on our intuitions about what a phrase is, coming up with phrase structure rules that reflect our syntactic knowledge of the structure of AP, NP, VP, and so on. We haven't yet provided any other *evidence* for phrases or clauses. To study language scientifically, we need to test the data and find evidence that supports or refutes our hypotheses—in this case, about phrase structure. In this section, we'll investigate some of the syntactic evidence for phrases and clauses. We'll introduce a number of important syntactic concepts, and we'll explore the syntax of two functional categories we haven't said much about yet: pronouns and conjunctions.

### Substitution

We've seen that NP can be made up of the head N along with an optional determiner (Det) and other optional phrases, including AP and PP modifiers. We assumed that these elements together form a constituent, a syntactic unit. There is evidence beyond just our intuitions that this is the case; NPs can be replaced by *pronouns*, words that replace noun phrases, by a process called **substitution**. You've probably learned in school that pronouns replace nouns, but you'll see here that that is not the case!

The italicized NP in the following sentence has been replaced by the pronoun *they*:

*The new houses* will make a fine addition to the neighborhood.  
*They* will make a fine addition to the neighborhood.  
*They* = the new houses.

The NP *that mouse* is replaced by the pronoun *it*.

*That mouse* ran under the bed.  
*It* ran under the bed.  
*It* = that mouse.

Even very large NPs can be replaced by pronouns:

*The mouse that Jill found in her pocket when she put her coat on yesterday* ran under the bed.

#### substitution

process by which we replace a phrase with a pronoun (or other proform)

*It* ran under the bed.

*It* = the mouse that Jill found in her pocket when she put her coat on yesterday.

Now, look at the evidence in this next set of sentences. From this evidence, we might conclude that what you learned in school is true: pronouns really do replace nouns. The pronouns *they* and *he* seem to replace the nouns *students* and *Bob*, respectively.

*Students* ran through the park.

*They* ran through the park.

*Bob* ran through the park.

*He* ran through the park.

But if pronouns replace nouns (rather than noun phrases), then why can't we replace *house* (a noun) with a pronoun?

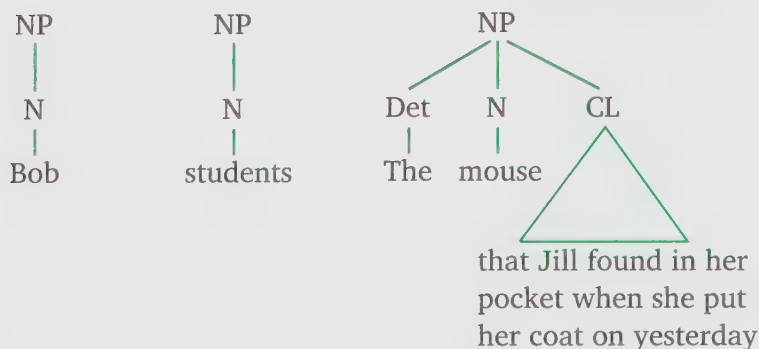
The new *houses* will make a fine addition to the neighborhood.

\*The new *they* will make a fine addition to the neighborhood.

And why can't we replace *mouse*, also a noun, with a pronoun?

\*The *it* that Jill found in her pocket when she put her coat on yesterday ran under the bed.

The answer is that pronouns replace noun phrases, not nouns. The italicized phrases *students* and *Bob*, respectively, are not only nouns but full noun phrases. Here's where phrase structure rules come in handy; by drawing tree diagrams, we can show how *students* and *Bob* are noun phrases, just like *the new houses* and *the mouse that Jill found in her pocket when she put her coat on yesterday*.



In these tree diagrams, the NPs *students* and *Bob* consist only of a head N. These are therefore the smallest possible noun phrases we can have, those



with only N. The more complex NPs (*the new houses*, *the mouse that Jill found in her pocket when she put her coat on yesterday*), on the other hand, consist of a head N and other material (Det, an AP modifier, and in one case a very large modifier of the noun *mouse*). Even though these NPs are larger than the NP *Bob* and *students*, they are all nevertheless NPs. If we assume that pronouns replace only NPs but not Ns, we explain why all of these NPs can be replaced by pronouns. We also explain why the NPs in which we tried to replace only the head N are ungrammatical; pronouns do not replace nouns. Substitution, therefore, provides evidence for noun phrases as syntactic units.

## Language Alive!

### Silent Pronoun?

Linguists have found much evidence in support of silent pronouns and even for different types of silent pronouns with distinct syntactic behavior. Certain silent pronouns occur regularly in Spanish, Italian, and other languages, but not in English (examples here are from Italian).

Son il tricheco.

Δ am the walrus.

'I am the walrus.'

Parla.

Δ speaks.

'He/she/it speaks.'

It is possible in *null subject* languages such as Spanish and Italian to routinely produce sentences in which the subject is missing but interpreted. One reason for this might be that in Spanish and Italian, the inflection on the verb provides enough information for the hearer to interpret the missing subject (as a third person pronoun, for example), but it's not entirely clear that this is the only reason. French, also a Romance language with verbs that express inflection in a way similar to verbs in Spanish and Italian, does not appear to be a null subject language. One can say *Je suis le morse*/*Je parle* ('I am the walrus'/'I speak') with a subject pronoun *je*, but if that subject pronoun is silent, the result is ungrammatical *\*Suis le morse*/*\*Parle*.

Although exactly what makes a language a null subject language is the topic of a great deal of study, linguists generally agree that whether a language has this property or not follows from the *null subject parameter* that we briefly discussed in Chapter 1. In English and French, the "switch" for this parameter is set to "off," but in Spanish and Italian, it is "on."

**proform** word that substitutes for a phrase (AP, PP, or even a clause)

So far, we've talked only about pronouns substituting for NP, but in fact, other **proforms** can substitute for other phrases (that aren't NP) as well. For example, the proform *do so* replaces VP, again showing that VP forms a constituent:

The mouse ran down the hall, and the cat *did so*, too.  
VP

Mary wanted to go to Hawaii, but she couldn't *do so* because she didn't have the money. VP

The proform *so* can replace AP, and *there* can replace PPs that express location:

That giraffe is extremely tall, and *so* is that elephant.  
VP

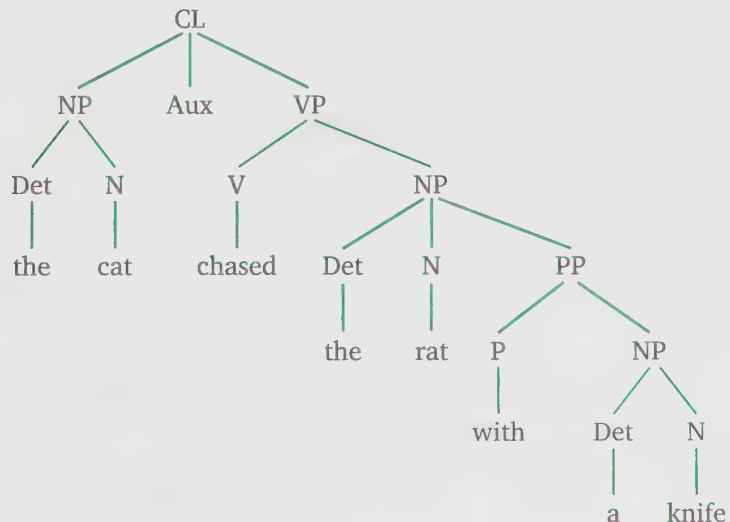
I left the book on the table, but now it's not *there*.  
PP

*So* can even replace an entire clause:

I thought that the movie was terrific, even though you didn't think *so*!  
CL

## Pronouns and Ambiguity

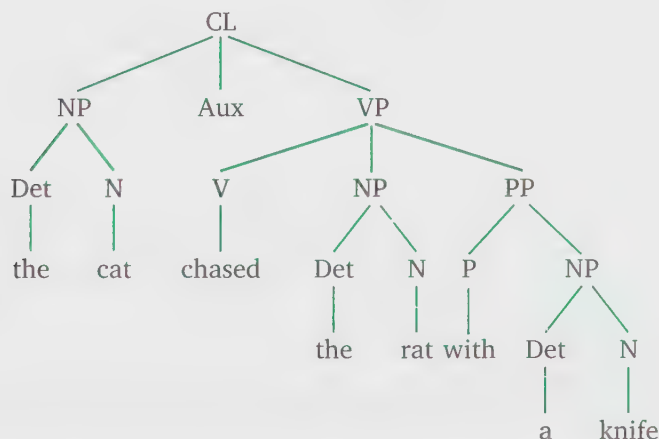
Pronouns also provide us with evidence for hierarchical structure. Let's look again at the ambiguous sentence we discussed earlier: *The cat chased the rat with a knife*. Remember that this ambiguous sentence has two possible structures. Here's one of them:



In this tree, the PP *with a knife* is a constituent of NP. We can replace this NP with a pronoun *him*.

The cat chased *him*.  
*him* = the rat with a knife

Now, let's look at the second tree for this sentence.



Here, the PP *with a knife* is a constituent of VP, not NP. We can replace the NP *the rat* with *him*, but the PP *with a knife* is not included:

The cat chased *him* with a knife.

So, pronoun substitution provides us with further evidence for our two tree structures, and it is also a good way to tell whether a phrase (here, PP) is a constituent of another phrase (here, of NP or VP) when you diagram a sentence.

#### RPE 8.4

## Pronoun Reference

**antecedent** phrase to which a proform refers; can be linguistic (spoken, written, or signed) or pragmatic (interpreted from context)

**pronoun reference** relates a pronoun to its antecedent, the phrase to which the pronoun refers

Pronouns provide evidence for phrases in another way as well. Their syntactic properties tell us that we have very clear intuitions about clauses and the boundaries between them. The evidence we will discuss here has to do with the syntactic relationship between pronouns and their **antecedents**, the phrases to which they refer. This phenomenon is called **pronoun reference**.

It's fairly obvious that pronouns must refer to something; the pronoun *she*, for example, is impossible to interpret unless we can hook it up with an antecedent. (In the random phrase *she's not here*, we have no idea who *she* is, without some kind of linguistic or contextual clue.) The antecedent of a pronoun can be in another sentence, what we call a *linguistic antecedent*, or it can be implied by the context, a *pragmatic antecedent*. For instance, in the

following sentence, the antecedent *a student* precedes *she* in the sentence, providing the pronoun with a linguistic antecedent:

*A student came in, and she sat down.*

In the description of the following scene, on the other hand, there is no linguistic antecedent for the pronouns *him* and *he*. Instead, the speakers understand the antecedent for these pronouns from the context: they take the child on the bike as the referent for the two pronouns. This is an example of a pragmatic antecedent.

Two children are watching a third child race down the street on a bike.

Child A: Look at *him* go!

Child B: Wow! *He's* going really fast!

RPE 8.5

### Did You Know...?



#### Who Are *They*, Anyway?

*They* said it's not supposed to rain tomorrow. *They* say that ferrets make good pets. Who are *they*—the ones who seem to know everything and to be responsible for all kinds of things? There is no linguistic antecedent for *they* in such sentences, but we nevertheless understand these sentences perfectly well. And it's not just *they* we can use this way. Look at the use of pronouns in the following sentences:

In the future, *we'll* have cars that run on alternative energy, and *you'll* be able to avoid standing in line at the gas pump.

Is this sentence really about you and me? When we use pronouns in this way, they are called *impersonal*, as opposed to *personal*, because they refer to, well, no one in particular. We might say they have pragmatic antecedents, antecedents that are understood but not linguistically expressed. Such pronouns are similar in some ways to *it* in sentences such as *it's raining*, where *it* doesn't have an antecedent (pragmatic or linguistic).

Now, let's look in a bit more detail at the syntax of pronoun reference. Reflexive pronouns (the *-self* pronouns) and personal pronouns (*he/him, she/her, it, we/us*, etc.) differ in an interesting way with respect to the syntactic position of their linguistic antecedents. To illustrate, consider the following set of sentences:

John likes *him*. (*him* cannot refer to John)

John likes *himself*. (*himself* must refer to John)

These data illustrate that although *himself* requires an antecedent in the same clause, the opposite is true of *him*; the antecedent of this pronoun *cannot* be in the same clause.



# Language Alive!

## Pronouns, Prestige, and Illogical Rules

Many of us learned (in school, from our parents, or elsewhere) that the first of the following sentences is correct, and the second is incorrect.

Jane and I went to the store.

\*Jane and me went to the store.

We're taught that the second sentence is incorrect because we're supposed to use *I*, the nominative case form of the first person pronoun, rather than the accusative form *me*. As "proof" of the incredible logic of this rule, we are presented with

I/\*me went to the store.

The reasoning is that *I* is correct because only *I*, and not *me*, is grammatical when there is only a single subject.

Hmm. According to Emonds (1986), this logic is not really logical, however; nor does it explain why, in natural speech, many people are likely to say "Jane and me went to the store" or "Me and Jane went to the store" even if they would never say "Me went to the store." So, the nominative pronoun sounds odd when there's only one subject, *Me went to the store*, but fine when there are two, *Me and Jane went to the store*. And to make matters worse, what about the following sets of sentences?

*We* went to the store. / Jane and *we* went to the store. / Jane and *us* went to the store.

*They* went to the store. / Jane and *they* went to the store. / Jane and *them* went to the store.

According to the logic that tells us to use *Jane and I*, the second sentence in each of the foregoing sets of sentences is supposed to be correct, with nominative *we* and *they*. What about the third sentence in each set, with accusative *us* and *them*? They are still odd but perhaps better than the nominative pronouns. What does this mean? That the prescriptive rule we are taught that may keep us from saying "John and me went to the store" is in fact not logical at all and cannot be generalized to pronouns other than *I*!

The way we use pronouns can mark us as standard or nonstandard speakers. Pronouns still show morphological case in English, and prescriptive rules of pronoun usage depend on using the "correct" case form of the pronoun. But these rules are often quite inconsistent and arbitrary and don't conform to rules of natural language (and therefore must be consciously learned).

The evidence from pronoun reference also tells us that we know what clauses are (even though we might have trouble identifying them in written English). Otherwise, we'd have no way to explain our very clear intuitions about the possible antecedents for *him* and *himself* in the preceding examples. We even seem to have a very clear understanding of subordinate clauses, clauses contained inside larger ones. Consider the following examples:

Elmer thinks that Irma must know *him*.

\*Elmer thinks that Irma must know *himself*.

In the first sentence, *him* occurs in a subordinate clause (the underlined section). *Him* can refer to *Elmer* because in this case *Elmer* is outside of the clause containing *him*. The second sentence shows that the reflexive pronoun *himself*, on the other hand, can't take *Elmer* as an antecedent because *Elmer* is outside the (underlined) clause containing the reflexive. This evidence again suggests not only that we are very much aware of clause boundaries in general but also that we can easily (unconsciously, at least) distinguish between independent and subordinate clauses. We can informally state the rules of pronoun reference, which depend on our understanding of clause boundaries, as follows:

A personal pronoun must have an antecedent *outside* of the (immediate) clause that contains it.

A reflexive pronoun must have an antecedent *inside* of the (immediate) clause that contains it.

The syntax of pronouns, then, provides evidence not only for the constituent structure of NP but also for our knowledge of clauses and clause boundaries.

## RPE 8.6

## Conjunctions and Coordination

Conjunctions, a class of function words that we introduced in Chapter 5, allow us to connect phrases in a variety of ways, a syntactic process called **coordination**. As the following examples illustrate, phrases of any category can be coordinated, and so can clauses. What is interesting about coordination is that the coordinated phrases usually have to be of the same category.

### coordination

joining phrases (of the same category, usually) with a conjunction (*for*, *and*, *nor*, *but*, *or*, *yet*, and *so*)

Amelia left *this team* for *that one*. (NP + NP)

Amelia both *loves* and *hates* soccer. (V + V)

Amelia *doesn't like soccer*, nor *can she play very well*. (CL + CL)

Amelia saw not *seven* but *six* soccer games. (D + D)

Amelia *won't* or *can't* play soccer. (Aux + Aux)

Amelia *plays soccer*, yet *she likes softball better*. (CL + CL)

Amelia *left early*, so *they played the game without her*. (CL + CL)

**parallelism**  
constraint on  
coordinating like  
categories (NP and  
NP, VP and VP, etc.)

This same-category requirement is sometimes referred to as **parallelism**. Coordination that violates parallelism sounds odd, if not ungrammatical, and we are more apt to find examples in written English than in speech. We return to parallelism in more detail in Chapter 13, where we discuss written representations of English. Here are some examples to illustrate this phenomenon:

\*Amelia plays *the guitar* and *in the woods*. (NP + PP)

(Compare: Amelia plays the guitar and the banjo.)

\*Amelia saw not *seven* but *thrilling* soccer games. (Det + AP)

(Compare: Amelia saw not *boring* but *thrilling* soccer games.)

It is useful here to point out the difference between coordination and subordination. Remember that a *subordinate* clause is one that is contained inside another phrase. Here is an example of an independent clause that contains a subordinate clause:

John believes *that Wiley told a lie*.

This sentence is very different in meaning and in structure when we coordinate rather than subordinate the clauses:

*John believes in honesty* and *Wiley told a lie*.

We can think of subordination as a syntactic way of subordinating one idea to another; the subordinate clause *Wiley told a lie* is not the main idea but is subordinate to the larger idea, what John believes. In the coordinate clauses, on the other hand, neither clause is subordinate (in structure or meaning) to the other. In traditional grammar, subordination is called **hypotaxis**, and coordination is called **parataxis**.

## Coordination and Ambiguity

Coordination also provides some interesting evidence for constituency in other ways. For example, consider the following ambiguous sentence:

We ate chocolate-covered grasshoppers and flies.

Did we eat chocolate-covered grasshoppers and chocolate-covered flies, or just plain old flies? Phrase structure and coordination allow us to explain why this sentence is ambiguous. Each meaning can be represented by a different tree diagram, as the following trees illustrate.

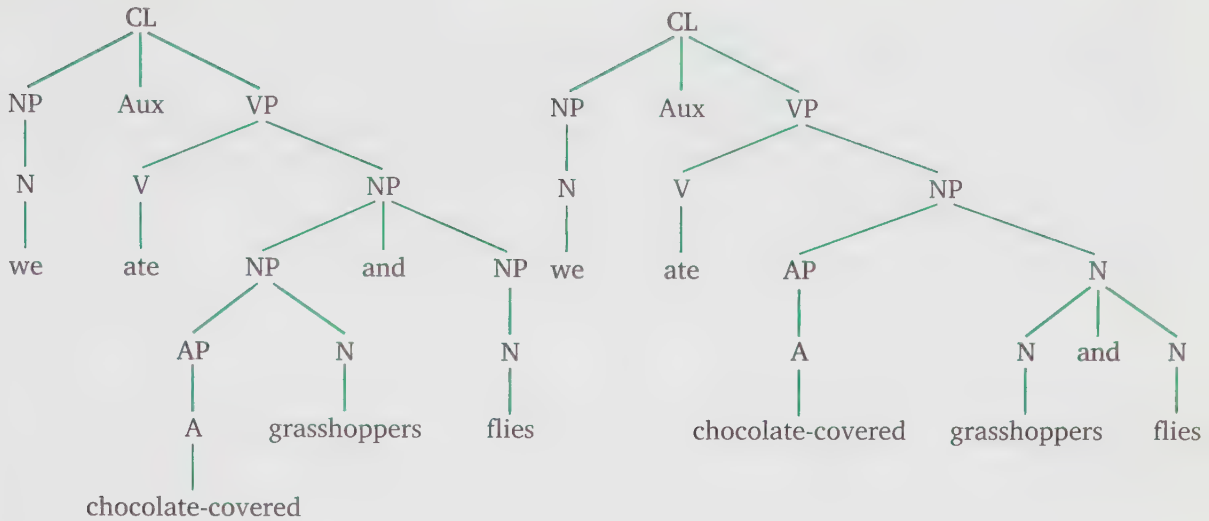
We can now see that the AP *chocolate-covered* modifies only the N *grasshoppers*, or it modifies the coordinated Ns *grasshoppers and flies*.

### RPE 8.7

**hypotaxis** subordi-  
nate clause structure

**parataxis** coordi-  
nate clause structure

### RPE 8.8



## Language Alive!

### Sex and Syntax

Otto Jespersen (a great early twentieth-century linguist) is rather famous for his claims about the differences between men's and women's speech. In his influential book *Language: Its Nature, Development and Origin*, first published in 1922, he wrote an entire chapter titled "The Woman," in which he says,

In learned terminology we may say that men are fond of hypotaxis and women of parataxis. Or we may use the simile that the male period [read *sentence*] is often like a set of Chinese boxes, one within another, while a feminine period is like a set of pearls joined together on a string of *ands* and similar words. (251–252)

Jespersen also claimed that women often produce half-finished sentences, a claim he used as evidence to support the then widely held perception that women don't think before they speak! As you might expect, there is no evidence for Jespersen's claim in terms of natural, spoken language. Interestingly, however, claims about "women's language" based on social perceptions have persisted. For example, Robin Lakoff, in her 1975 book *Language and Women's Place*, suggests that women use a variety of conversational strategies that men do not, based on women's lower social status and their need for acceptance. Lakoff's claims, though an important first step in language and gender studies, have since been shown to be based on anecdotal evidence rather than scientific investigation and to reflect, as Jespersen's do, expectations and assumptions about gender and language rather than linguistic fact.



## Movement and Deletion

So far, we've focused mainly on phrase structure and on the internal structure of different phrasal categories and clauses. We've shown how phrase structure rules express many aspects of our knowledge of syntax:

- the basic order of words in a sentence
- syntactic categories, heads, and phrases
- hierarchical structure
- recursion
- silent syntax

Phrase structure reflects the basic structure, what linguists refer to as the *base order*, of phrases and clauses in a language, as well as properties of those base orders. Syntax is more than just phrase structure, however. For example, consider the following sentences:

Lorraine *has* emptied the garbage.  
*Has* Lorraine emptied the garbage?

hwæt!

Chomsky's ideas have often been controversial, even sparking what have been called the "Linguistics Wars." These were the 1960s disputes between Chomsky and some of his students about aspects of grammatical theory, including the concepts of deep and surface structure.

### movement

syntactic operation by which phrases can be rearranged in a sentence under specific conditions or constraints

### deep structure

clause in its base word order (in English, SVO) before syntactic rules such as movement or deletion apply

This pair of sentences illustrates the operation of subject-auxiliary inversion (SAI), which we discussed in our investigation of the English auxiliary verb system. In Chapter 7, we assumed that the auxiliary verb moved from its basic position (to the right of the subject NP *Lorraine*) to sentence-initial position (to the left of the subject NP). This suggests an important relationship between the first sentence and the second: we actually *derive* the second one from the first by **movement**—in this case, by SAI.

This relationship between base order and derived order is one of the foundations of Noam Chomsky's theory of generative grammar. As you may recall from our discussion in Chapter 1, Chomsky proposed that to account for the human ability to create

and understand novel sentences, we must assume that knowing a language doesn't mean knowing all the sentences in that language. Rather, it means knowing a grammar, the system of rules and operations that allow us to generate possible sentences in the language. Movement rules are examples of the rules and operations that allow us to generate sentences. Put slightly differently, these rules and operations allow us to derive one sentence from another. A child, then, acquires the rule of SAI and can then use that rule to form questions from any sentence she hears. She can generate a novel question without ever having heard it before.

## Deep and Surface Structure

Originally, Chomsky proposed that the base order of the sentence is the **deep structure** and that derived orders (derived by the application of

**surface structure** clause in its derived order after movement and deletion rules have applied

movement rules such as SAI) are **surface structures**. The ways in which we can rearrange phrases and words in a sentence are part of our knowledge of syntax beyond our knowledge of phrase structure rules. Phrase structure rules provide a roadmap of the basic orders and structures of the language, but they don't explain how these orders can be rearranged.

The deep and surface structure model, or theory (illustrated schematically below) captures the generalization that acquiring a language involves acquiring rules rather than memorizing a (vast and limitless) list of sentences:

DEEP STRUCTURE



Application of rules



SURFACE STRUCTURE

We won't go into the particulars of the theory here, but in this section we will investigate some of the basic syntactic puzzles that have motivated the deep and surface structure model (though in its current incarnation the model looks quite different from Chomsky's original version). We will investigate some syntactic operations that apply to base orders, operations that, however they are described, must be part of our unconscious knowledge of language. We will also show how the basic concepts we've introduced so far—such as subordination, coordination, and understood, or silent, syntax—play a significant role in those rules and operations.

## Deletion Rules

There are many kinds of silent syntax, syntactic structure that is not pronounced but nevertheless understood. Earlier, we discussed some examples of silent yet understood subjects and complements. Here, we'll look at some other examples of silent syntax and show how they can be explained by proposing that part of our knowledge of syntax includes knowledge of the syntactic operation of **deletion**.

**deletion** process by which constituents are deleted in a sentence under certain syntactic conditions

### Verb Phrase Deletion

The following are examples of sentences in which deletion has applied:

Alfie is riding his motorcycle across the desert, and Ziggy is  $\Delta$ , too.  
Sally said she would get a llama, and she did  $\Delta$ .  
Even though she shouldn't  $\Delta$ , Violet will stay out late tonight.

## Did You Know...?



## “Does She . . . or Doesn’t She?”

A popular 1960s television commercial for Clairol hair color products shows a young woman running across the screen with her beautiful hair flying behind her. The voiceover says, “Does she . . . or doesn’t she? Hair color so natural only her hairdresser knows for sure!” Knows what? Does she or doesn’t she what? Well, it was pretty obvious from the context that the missing phrase is *color her hair*, and the point was that Clairol products were desirable because they were so natural looking no one could tell whether a woman colored her hair.

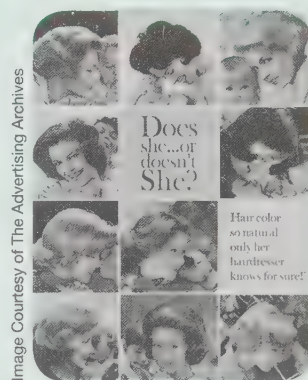


Image Courtesy of The Advertising Archives

Besides being a groundbreaking advertising slogan (it began in the 1950s and ran for 18 years), the phrase *does she or doesn’t she* became somewhat controversial among linguists who studied VP deletion; does this phrase constitute evidence that VP deletion takes a pragmatic antecedent? Or does the advertising context make this an unnatural example?

*For more information*

Hankamer, J. & I. Sag. 1976. Deep and surface anaphora. *Linguistic Inquiry* 7. 391–426. Cambridge, MA: MIT Press.

Polykoff, S. (Clairol ad originator). [http://www.ciadvertising.org/studies/student/00\\_spring/theory/kwilliam/public\\_html/polykoff/ads.html](http://www.ciadvertising.org/studies/student/00_spring/theory/kwilliam/public_html/polykoff/ads.html). (26 October, 2008.)

Schachter, P. 1977. “Does she or doesn’t she?” *Linguistic Inquiry* 8. 763–767. Cambridge, MA: MIT Press.

In each of these examples, the  $\Delta$  is (unambiguously) interpreted as identical to another constituent in the sentence:

Alfie is *riding his motorcycle across the desert*, and Ziggy is  $\Delta$ , too.  
( $\Delta$  = riding his motorcycle across the desert)

Sally said she would *get a llama*, and she did  $\Delta$ .  
( $\Delta$  = get a llama)

Even though she shouldn’t  $\Delta$ , Violet will *stay out late tonight*.  
( $\Delta$  = stay out late tonight)

The missing constituent in each case is a VP. This phenomenon, very common in English, is called **VP deletion**. VP deletion involves deleting

**VP deletion**

syntactic operation in which a verb phrase is deleted but understood as referring to an antecedent verb phrase (*I don’t jog, but Olivia does.*)

a VP when it is identical to another VP somewhere close by, not necessarily in the same sentence. In the following exchange, for example, the deleted VP is in a completely different utterance.

Speaker A: Did Sally buy a llama?

Speaker B: She did  $\Delta$ .

VP deletion is in a certain way similar to pronoun reference. For instance, remember that a pronoun has to have an antecedent, something to which it refers. *It* in the following sentence takes *her llama* as an antecedent, and the antecedent of *her* is *Sally*.

Sally loves her llama, and *it* loves *her* too.

The deleted VP also seems to have an antecedent, namely some other (pronounced) VP in the surrounding discourse. The antecedent of  $\Delta$  is *buy a llama* in the preceding clause.

## RPE 8.9

**gapping** deletion operation that applies in coordinate clauses (*Sam likes halibut, and Cary, salmon*)

## Gapping

Below we give some examples of another deletion rule, called **gapping**. As with VP deletion, we have no trouble interpreting the missing material:

Ziggy bought a Harley, and Alfie bought a Yamaha.

Ziggy bought a Harley, and Alfie  $\Delta$  a Yamaha.

$\Delta$  = *bought*

Sally likes llamas, but Sam likes alpacas.

Sally likes llamas, but Sam  $\Delta$  alpacas.

$\Delta$  = *likes*

This phenomenon differs in several ways (some of which we discuss below) from VP deletion. It is similar, however, in deleting some element (here, a verb) when it is identical to another element in the preceding discourse.

## hwæt!

Shirley Polykoff is the ad agency copywriter who wrote “Does she . . . or doesn’t she?”—one of the top ten slogans of the twentieth century. This ad campaign for Clairol sent the marketing industry in new directions and increased the use of hair color, which led to phenomenal profits in that industry

## Constraints on Deletion

Both VP deletion and gapping are strictly constrained rules. That is, they operate only under certain conditions. Put more simply, we don’t delete a VP or a V just anywhere we want to, another example of our (quite complex) unconscious knowledge of syntax.

VP deletion can operate in either a subordinate clause (introduced here by *even though*) or a coordinate clause (preceded by *and*):

Violet will stay out late tonight even though *she shouldn’t*  $\Delta$ .

subordinate clause

Violet will stay out late tonight, and *she shouldn’t*  $\Delta$ .

coordinate clause



In these examples, the deleted VP follows its antecedent. The deleted VP can also precede its antecedent, as in the following sentence:

Even though *she shouldn't Δ*, Violet will *stay out late tonight*.  
deleted VP                                  antecedent

A gap, on the other hand, can't occur in a subordinate clause, only in a co-ordinate clause:

\*Ziggy bought a Harley even though *Alfie*  $\Delta$  a *Yamaha*.  
subordinate clause

Ziggy bought a Harley, and Alfie  $\Delta$  a Yamaha.  
coordinate clause

And a gap can only follow, but never precede, its antecedent:

\**Alfie Δ a Yamaha<sub>2</sub>*, and *Ziggy bought a Harley.*  
                     gapped V                      antecedent V

Complexities aside, the important point here is that the ungrammaticality of these sentences tells us that VP deletion and gapping operate only under certain conditions. In addition to the rules of VP deletion and gapping, our unconscious knowledge of syntax includes an understanding of where these rules can operate and where they can't.

Let's look now at these syntactic phenomena in terms of deep and surface structure. There is evidence for a rule of VP deletion that deletes a VP under certain syntactic conditions. This rule applies to deep structures to derive surface structures (where VP will be missing).

DEEP STRUCTURE	Sally wanted to buy a llama, and she did buy a llama.
----------------	--



Application of rule	VP deletion
---------------------	-------------



**SURFACE STRUCTURE** Sally wanted to buy a llama, and she did  $\Delta$ .

Similarly, for gapping we can say that the rule deletes V under certain conditions.

DEEP STRUCTURE Sally likes llamas, but Sam likes alpacas.

↓

Application of rule      gapping

↓

**SURFACE STRUCTURE** Sally likes llamas, but Sam  $\Delta$  alpacas.

If we assume that VP deletion and gapping rules are part of our knowledge of English syntax, we can then expect a child acquiring the language to acquire the rules and to then be able to apply them, producing novel examples of these phenomena that he or she may not have uttered before.

## Reordering Phrases: Movement

We'll now turn to a discussion of movement rules in more detail. One movement rule that we are already familiar with is subject-auxiliary inversion (SAI). This rule has the effect of moving an auxiliary verb to sentence-initial position:

**passive** syntactic operation in which an active sentence (*Beowulf killed Grendel*) is reordered: the object moves to the subject position, and the subject occurs in a prepositional phrase (*Grendel was killed by Beowulf*)

DEEP STRUCTURE	Minerva is singing the aria.
↓	
Application of rule	SAI
↓	
SURFACE STRUCTURE	Is Minerva singing the aria?

We also talked about the *active* and *passive* sentences below.

*Beowulf* killed *Grendel*.  
*Grendel* was killed by *Beowulf*.

### hwæt!

Despite the challenges of reading and interpreting more than 3,000 lines of Old English poetry, the epic poem *Beowulf* has lasted more than a thousand years, evolving from oral traditions to manuscripts to books to audio recordings and, in 2007, to a popular film.

We know intuitively that the active sentence is related to the passive one; they mean the same thing, even though the word order has been rearranged. We can therefore propose that the passive is derived from the active. The active sentence is therefore the deep structure, and the passive, a possible surface structure, is derived by the application of a rule that moves *Beowulf* to the end of the sentence and *Grendel* to the subject position. We'll call this rule **passive**.

DEEP STRUCTURE	Beowulf killed Grendel.
↓	
Application of rule	passive
↓	
SURFACE STRUCTURE	Grendel was killed by Beowulf.

## Did You Know...?



## Passive Should Be Avoided?

You are likely familiar with the old adage “Avoid passive in writing.” According to Sherry Roberts, in *11 Ways to Improve Your Writing and Your Business* (1992),

A sentence written in the active voice is the straight-shooting sheriff who faces the gunslinger proudly and fearlessly. It is honest, straightforward; you know where you stand. A sentence written in passive voice is the shifty desperado who tries to win the gunfight by shooting the sheriff in the back, stealing his horse, and sneaking out of town. (para. 27)

Such descriptions are typical of traditional ideas about the use of the active and passive voice in writing. Arnold Zwicky (2006) wrote in a *Language Log* posting about this kind of objection to passive, noting that “[It] is an appeal to metaphorical values attached to the two voices: active as energetic, strong, and emphatic, passive as inert, weak, and reserved.” But passive sentences have the same meanings as their active counterparts; *Grendel was killed by Beowulf* means exactly the same thing as *Beowulf killed Grendel*. The difference is that in the passive sentence, Grendel, the logical object, is highlighted or focused. So, when you want to highlight the object, passive is perfectly appropriate and often a better choice. Zwicky notes that although pronouncements about the “weakness” of passive voice abound in writing handbooks, very few authors discuss the actual grammatical structure and semantics of the construction.

*For more information*

Pullum, G. 2006. Passive aggression. *Language Log*. July 18. <http://itre.cis.upenn.edu/~myl/language-log/archives/003366.html>

Roberts, S. 1992. *11 ways to improve your writing and your business*. Greensboro, NC: The Roberts Group. <http://www.editorialservice.com/11ways.html>

Zwicky, A. 2006. How long have we been avoiding the passive, and why? *Language Log*. July 22. <http://itre.cis.upenn.edu/~myl/language-log/archives/003380.html>

Zwicky, A. 2007. Evil passive voice. *Language Log*. May 1. <http://itre.cis.upenn.edu/~myl/language-log/archives/004456.html>

## Constraints on Movement

As we might by now expect, there are constraints, or restrictions, on movement rules. For example, passive can apply only in clauses with certain verbs. Passive is impossible in clauses with stative verbs, such as *resembled*, *become*, and *remain*. It is perfectly acceptable in clauses with active verbs, however, such as *meet* and *discuss*. (We return to semantic classes of verbs and how they interact with syntax more in Chapter 9.)

The child met an adult.  
 An adult was met by the child.  
 The girls discussed old friends.  
 Old friends were discussed by the girls.

The child became an adult.  
 \*An adult was become by the child.  
 The girls remained old friends.  
 \*Old friends were remained by the girls.

There are also constraints on SAI. One is that although the rule applies freely in main clauses, it cannot apply in subordinate clauses:

Minerva is singing the aria → Is Minerva singing the aria?  
 I think Minerva is singing the aria → \*I think is Minerva singing the aria?

A key part of the scientific study of language involves investigating why rules operate in some contexts but not in others. Linguists construct theories that attempt to explain (rather than simply catalogue) data such as those presented here.

## Wh-Movement

**wh-movement**  
 movement rule  
 in which an inter-  
 rogative phrase is  
 moved to sentence-  
 initial position  
 (*Who did Mary meet  
 yesterday?*)

Another movement rule is **wh-movement**. *Wh*-movement can be described as operating in two steps. First, a noun phrase is replaced by an interrogative *wh*-phrase (*who*, *what*, *when*, *where*, *how*, *why*) or a *wh*-phrase (*which car*, *how many teeth*, *what in the world*, etc.). Then, the phrase is fronted to clause-initial position. (*Wh*-movement also sometimes involves subject-auxiliary inversion, as in the example here.)

DEEP STRUCTURE

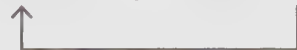
You talked to Bill.

Rule 1: substitution of *wh*-phrase:

You talked to who(m)?

Rule 2: movement of *wh*-phrase:

Who(m) did you talk to \_\_\_\_?



SURFACE STRUCTURE

Who(m) did you talk to?

Here's another example:

DEEP STRUCTURE

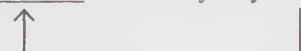
Marcy bought a car.

Rule 1: substitution of *wh*-phrase:

Marcy bought which car?

Rule 2: movement of *wh*-phrase:

Which car did Marcy buy \_\_\_\_?



SURFACE STRUCTURE

Which car did Marcy buy?



We can question not only NPs in this way but other phrases as well. First, we substitute the phrase with a *wh*-word or phrase, then we front it to sentence-initial position. Can you tell which phrase the *wh*-word substitutes for in the following sentences?

The students wrote their term papers quickly yesterday so they could go swimming.

What did the students write \_\_\_\_\_ quickly yesterday so they could go swimming?

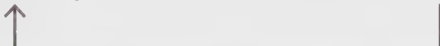
How did the students write their term papers \_\_\_\_\_ yesterday so they could go swimming?

When did the students write their term papers quickly \_\_\_\_\_ so they could go swimming?

Why did the students write their term papers quickly yesterday \_\_\_\_\_?

RPE 8.11

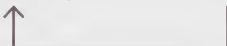
*Wh*-movement is subject to a number of constraints, and we'll explore a few well-known examples. Here is another example of a sentence in which *wh*-movement has applied, moving the object of a subordinate clause to the front of the sentence:

You think [that Willard likes pickles].  
What do you think [that Willard likes \_\_\_]?  


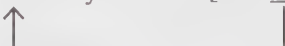
The *that* in this kind of sentence is optional, so the following sentence with *that* omitted is grammatical:

What do you think [Willard likes \_\_\_]?

Now let's consider another example in which *wh*-movement has applied, this time moving the subject of a subordinate clause to the front of the sentence:

You think [Willard likes pickles].  
Who do you think [\_\_\_ likes pickles]?  


The subordinate clause can also optionally be introduced by the word *that*. However, when *that* is present in this case, *wh*-movement is apparently blocked from applying (because if we do apply it, the result is ungrammatical):

You think [that Willard likes pickles].  
\*Who do you think [that \_\_\_ likes pickles]?  


It seems, then, that *wh*-movement of the subject of a subordinate clause is possible only if *that* is absent. *Wh*-movement of the object in a subordinate clause, on the other hand, seems unaffected by the presence or absence of *that*.

Let's look at another constraint on *wh*-movement. The first sentence below contains two coordinate clauses. The second sentence contains a subordinate clause, introduced by *that*.

*Sharks eat meat, but whales like plankton.*

coordinate clause

coordinate clause

*Stefan thinks that whales like plankton.*

subordinate clause

We know (from the discussion of *wh*-movement over *that*) that the object NP *plankton* can undergo *wh*-movement in the second sentence, moving over *that*.

What does Stefan think that whales like \_\_\_\_\_?

But *plankton* can't undergo *wh*-movement in the coordinate clause:

\*What do sharks eat meat and whales like \_\_\_\_\_?

These data raise two important questions. One is, Why can *wh*-movement apply to move *plankton* out of a subordinate clause but not out of a coordinate clause? The second, even larger, question is, How do we explain that a child seems to already know this distinction (children never make this kind of error)? In each sentence, *plankton* is in exactly the same position, namely, as the object of *like*. But somehow children understand clause boundaries, in particular the difference between subordinate and coordinate clauses. And they also know that rules that apply to one do not necessarily apply to the other. This is a good example of our unconscious knowledge of syntax and also of our ability to acquire language without instruction; certainly children are never taught the difference between subordinate and coordinate clauses and how *wh*-movement operates (or does not operate) in each!

Of course, we don't actually hear or see this movement (or deletion either, for that matter); it all must happen in our heads before we actually say the sentence out loud. Nevertheless, the evidence from *wh*-movement that we've presented here is good evidence that producing the sentences we actually utter involves complex grammatical operations—what we might think of as computations, much like those performed by your computer.

## Accent on Psycholinguists



Psycholinguists are not linguists who have gone off the deep end! They are linguists who study how we acquire, process, and produce language. We use language every day, all day, in many ways, without even thinking about it. Psycholinguists think about it. And observe it. And test it.

While neurolinguists study the physical mechanisms in the brain that underlie speech comprehension and production, psycholinguists investigate the unconscious processes that underlie our language abilities, primarily the production and processing of speech. Psycholinguistic research overlaps with other scientific research in psychology, linguistics, cognitive science, communication sciences and disorders, computer science, and neuroscience, and research findings contribute to the diverse and growing knowledge of human language ability.

Psycholinguistics involves all aspects of grammar. Psycholinguists study how the brain processes and understands sounds and prosody (phonology), how words and their parts are stored in our mental lexicons, and how we put them

together to produce, process, and comprehend words (morphology). Psycholinguists study how we understand meaning and interpret sentences (semantics) and how we produce and process sentences (a subfield known as *sentence processing*, which focuses on syntax).

Researchers who study sentence processing investigate the segmentation of sentences into smaller syntactic units (finding evidence for phrases), how these units might be combined to produce sentences, and also how we process *empty categories*, those empty spaces in a sentence left by movement or deletion. For example, when we encounter a sentence such as *Which car will Marcy buy?* linguists assume that the noun phrase *which car* begins (at deep structure) after the verb—*Marcy will buy which car*—and then moves to the front of the sentence. And in fact, psycholinguistic experimentation shows that this is not a purely theoretical claim: using electroencephalogram (EEG) recordings (shown in the photo), functional magnetic resonance imaging (fMRI), and other methods of experimentation, they find evidence that the moved phrase is *reactivated* at the original site: *Which car will Marcy buy which car*. Psycholinguistic investigation can therefore validate some of the proposals from linguistic theory and helps us to understand better how language is processed and produced in our brains, which can then lead to improved methods of helping people who have language disorders.

Many psycholinguists work at universities where they teach and research. Some psycholinguists conduct research that can help people who suffer from aphasia or people with language disorders such as specific language impairment (SLI). Others work as specialists in assessing, diagnosing, and treating people, often

children, who have language delays or disorders. We find people with training in psycholinguistics working in schools, hospitals, early intervention programs, or private practice.

For more information

Haskins Laboratories. <http://www.haskins.yale.edu/>

*Journal of Psycholinguistic Research*. <http://www.springerlink.com/content/104271/> (30 October, 2008.)

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## Summary

In this chapter, we've delved a little more deeply into syntax, going beyond the basic phrase structure rules and syntactic categories we investigated in Chapter 7. We've looked at how phrases are organized hierarchically and how recursion accounts for our ability to generate phrases within phrases within phrases. We've seen that we understand a great deal more about syntax: we can (effortlessly) interpret ambiguities and unpronounced, silent material; we know how to find the antecedents of pronouns; we are fully aware of clause boundaries. We've explored a few of the complex yet constrained ways in which phrases can be moved, deleted, and coordinated. And finally, we've shown one way that this range of syntactic phenomena can be expressed within a theoretical framework in terms of the abstract concepts of deep and surface structure.

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## Review, Practice, and Explore

### RPE 8.1 Syntactic Ambiguity: Drawing Trees

Draw tree diagrams for the following sentences, paying special attention to where each PP is attached. Some (but not all!) of the sentences are ambiguous. If there is ambiguity, draw two trees to represent the two meanings; be sure to indicate the meaning of each tree in this case.

- a. The boy with the hat sat on a mushroom with green spots.
- b. The white horse ran out the door on Monday.
- c. Bill likes pieces of cabbage with sauce.
- d. The ladybug with six spots sees the grasshopper on the branch.
- e. Seven large sloths climbed up the tree on the hill.
- f. The largest manatee chased the smallest manatee into a cave.
- g. Students from six states in the country attended the luncheon.

### RPE 8.2 Recursion

Some of the following sentences include phrases that are recursive. Can you identify the category of the recursive phrase(s) (PP, NP, CL, etc.)?

- a. The house on the corner by the bank is for sale.
- b. A few people came to the party, and everyone left early.
- c. I don't think that Barry was happy that Sam won the raffle.
- d. Cheese that you can buy at stores that import goods from overseas is usually pretty expensive.
- e. I jumped up and ran home.

In a text of your choice, find at least three examples of recursion (of any category you choose, but common examples include NP, PP, and clause recursion). Label the recursive categories.

### RPE 8.3 Silent Syntax

Each of the following sentences or exchanges includes a silent phrase, which is marked with  $\Delta$ . What syntactic material is missing in each sentence?

- a. I just bought three new textbooks, and Avery bought six Δ!
- b. You might want to go to the party, but I don't Δ.
- c. The book wasn't interesting enough Δ to finish Δ.
- d. I promised Jane Δ to take out the garbage.
- e. The mountaintop is hard Δ to see Δ in the fog.
- f. Δ Eat your dinner!

**RPE 8.4****Nouns, Noun Phrases, and Pronoun Substitution**

Find all the noun phrases in the following sentences. (Some include only a head noun; others are much larger.) Then, show how the pronoun substitution test provides evidence that those phrases are in fact noun phrases, even if they consist of only one word. Are any of the sentences ambiguous? How can pronoun substitution help you explain the two meanings?

**Example:** Dogs on leashes are allowed in this park.

*They* are allowed in *here*.

*They* = dogs on leashes, *here* = this park

- a. Dogs are free to run and jump and play with the toys in the park.
- b. My neighbor brings seven dogs to the park every day.
- c. The schnauzer and the cocker spaniel bark a lot.
- d. The schnauzer, the cocker spaniel, and the border collie like to play together.
- e. People who have dogs and like to take them out for exercise use the park often.
- f. Mary loves the park.

**RPE 8.5****Pronouns and Antecedents**

Find all the pronouns and their antecedents in the following excerpt. Do any of the pronouns seem to lack antecedents? What about *it*? Are there any pronouns with pragmatic antecedents?

The meaning of the text is not just an internal matter: it also inheres in the text's relation to wider systems of meaning . . . It is obvious that literary criticism has come a long way from the days when we had little to do but thrill to the beauty of the imagery. (Eagleton 1983: 89)

**RPE 8.6****A Pronoun Puzzle**

Recall that a personal pronoun can't have an antecedent in the same clause and that a reflexive pronoun *must* have an antecedent in the same clause.

Irma loves her. (*her* cannot refer to *Irma*)

Irma loves herself. (*herself* must refer to *Irma*)

Now, consider the following sentences. What are the possible antecedents of *her* and *herself*, and how does this evidence complicate our rules of pronoun reference? Think about the structure of the sentence, in particular the structure of the phrase *Irma's mother*.

Irma's mother loves her.

Irma's mother loves herself.

**RPE** 8.7 Coordination and Parallelism

Coordination seems to require parallelism: the conjoined constituents must be of the same syntactic category.

- A. Label the category of the italic phrases or words in the following examples of coordination.
1. Artichokes are *in season* but *out of stock*.
  2. Olivia heard *that schnauzers don't shed* and *that they make great pets*.
  3. I've never seen *a unicorn* or *a hippogriff*.
  4. *Each* and *every* candidate attended the rally.
  5. *Maurice saw the bus*, and *his son got on it*.
  6. We saw lots of nice cars, but only *two* or *three* were in our price range.
- B. Which of the following examples violate parallelism? Why or why not? Is it accurate to say that parallelism *always* requires the coordination of the same syntactic category? Under what circumstances can this requirement be relaxed?
1. Artichokes are *in season* and *very delicious*.
  2. Olivia heard *about schnauzers* and *that they make great pets*.
  3. I've never seen *a unicorn talk* or *a hippogriff sing*.
  4. *Each voter* and *every candidate* attended the rally.
  5. Maurice saw *the bus* and *that his son got on it*.
  6. Lucy was *grumpy* and *in a funk*.

**RPE** 8.8 Conjunction and Subordination

We've seen that coordination involves linking constituents in various ways. Subordination, on the other hand, involves embedding one constituent in another. For example,

Wiley will order seafood tonight because *he loves it*.

Here, the clause *he loves it* is subordinate and introduced by *because*, a member of a large set of *subordinating conjunctions* (also called *subordinating prepositions*), words that introduce subordinate clauses. Others in this class include *although*, *even though*, *since*, *while*, *when*, *before*, and *after*.

Wiley ate the shrimp *after* he ate the mussels.

Make up a pair of clauses. First, coordinate them with one of the coordinating conjunctions (*for*, *and*, *nor*, *but*, *or*, *yet*, *so*). Then try to use the same clauses, but this time subordinate one of the clauses to the other using a subordinating conjunction. How does subordination affect the meaning of the sentence?

*Example*     The children wanted to go swimming. It was a cool and breezy day.  
                   The children wanted to go swimming, *but* it was a cool and breezy day.  
                   The children wanted to go swimming *although* it was a cool and breezy day.

### RPE 8.9 The Good, the Bad, and the Ugly

Are these words (*good*, *bad*, and *ugly*) nouns or adjectives? They are introduced by a determiner (*the*), which suggests they are nouns. Let's look at more evidence and see if this hypothesis is correct. Consider the following sentences:

- The poor are always with us.
- The poor's power is always marginal.
- The very poor are always with us.

Is *poor* in these sentences a noun or an adjective? Why or why not? Apply the tests for different categories (discussed in Chapter 7), and see what you find. (*Hint*: Silent syntax may be involved.)

What are some other examples of words like *poor* that we use in this way? What do they have in common? What words don't work in this context?

### RPE 8.10 Particle Shift

Certain prepositions have the interesting syntactic property of being able to move around the direct object of the verb.

- a. You should hand out *the papers*.
- b. You should hand *the papers* out.

Prepositions with this property (the ability to move) are called *particles*. The movement rule illustrated in items (a) and (b) is called *particle shift*.

Which of the prepositions in items (c)–(f) are particles? Use particle shift as a test.

- c. Louise ran up a big hill.
- d. Louise ran up a big bill.
- e. Franz turned on the lights.
- f. Franz turned on the corner.

Write down three sentences with particles (use different examples from those given here). Show how they undergo particle shift. Also, write down three sentences with prepositions, and show how these do *not* undergo particle shift.

### RPE 8.11 Deep and Surface Structure

In the following sentences, one or more of these rules may have applied: SAI, passive, and *wh*-movement. Write out the deep structure for each sentence, list the rules that have applied, and write out the surface structure. In some cases, more than one rule might apply, so list them both.

<b>Example:</b>	Will it rain?	DEEP STRUCTURE	It will rain.
		Application of rules	SAI
		SURFACE STRUCTURE	Will it rain?

- a. Is *The Lord of the Rings* your favorite movie series?
- b. The window was broken by the baseball.



- c. Which letter did the secretary mail?
- d. Should we go home?
- e. A letter was mailed by the secretary.
- f. Was your stolen jewelry ever recovered by the police?

### RPE 8.12 A Cross-Linguistic Look at *Wh*-Movement

#### *Wh*-Questions in Chinese

We have seen that English has *wh*-movement:

- a. Jack can see *the rabbit*. = basic word order
- b. *What* can Jack see? = question word order

Some languages have no *wh*-movement. The basic word order is the same in declaratives and in questions. Chinese is an example:

Ta        yao        xiaobing        (basic word order)  
 she/he   want   bread  
 'She/he wants some bread.'

Ta        yao        shenme        (question word order)  
 she/he   want   what  
 'What does she/he want?'

In English, the movement of the *wh*-phrase to the front of the clause marks the clause as a question. How do you think Chinese speakers know that a question is being asked?

#### *Wh*-Questions in Aleut

Aleut is a language spoken on the Aleutian Islands off the coast of Alaska. Look at the following pairs of sentences in Aleut and their translations, and determine whether or not Aleut has *wh*-movement.

- a. Piitrax Ivaanax ilagulix.  
 Peter John help  
 'Peter is helping John.'
- b. Piitrax kiin ilagulix?  
 Peter who help  
 'Who is Peter helping?'
- a. Tayagux qax qalix.  
 man fish eat  
 'The man is eating a fish.'
- b. Tayagux alqutax qalix?  
 man what eat  
 'What is the man eating?'

**RPE 8.13****Another Constraint on *Wh*-Movement in English**

Here are some more sentences in which *wh*-movement in English appears to be blocked.

- a. Whose book did you read \_\_\_\_\_?
- b. \*Whose did you read \_\_\_\_\_ book?

Why is (b) ungrammatical?

Here are some similar examples in which *wh*-movement is grammatical. Can you make up the ungrammatical sentences patterned in the same way as (b) from these examples? Can you state (informally) the constraint on *wh*-movement that blocks the ungrammatical sentences from being generated?

- a. Which person did you meet yesterday?
- b. What class does John have in the morning?
- c. Whose dog are you taking care of?



## Chapter at a Glance

# Semantics: Making Meaning with Words

## Key Concepts

- Words have arbitrary meanings that we can express in terms of semantic features.
- Word meanings are also constructed through a variety of relationships, which we refer to here as the *nyms*.
- Word meanings change over time; meanings broaden and narrow and sometimes become more positive or more negative.
- Words have many nonliteral, or figurative, meanings, which are often quite complex and abstract, but we understand and use them effortlessly in speech and writing every day.
- The various ways in which we construct meaning out of words tells us something about how we think and about how we understand the world.

## Did You Know . . . ?

Can Something Be *Very Dead*?  
Hearing Colors

## Language Alive! Is the Team Playing? Are the Team Playing?

Shifts in Meaning: Progress or Decay?

## Linguistics in the News Talking Right . . . and Left

## Accent on Linguistics and Computers

### Making Meaning

Semantic Deviance

### Lexical Semantics

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### Meaning Relationships: The Nyms

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Different Meanings: Homonymy

Many Meanings: Lexical Ambiguity

### Meaning Change: Semantic Shift

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### Summary

### Sources and Resources

### Review, Practice, and Explore



**semantics** system of rules underlying our knowledge of word and sentence meaning

In this chapter, we will explore our unconscious knowledge of the semantics of words and the system of rules that underlies this knowledge. Understanding and creating meaning out of words is not a simple matter but rather involves a complex system of linguistic rules that interact with other grammatical systems, including syntax, phonology, and morphology. **Semantics** is the study of how we construct and understand the meanings of words and groups of words (clauses, sentences, etc.). Our complex knowledge of word meaning encompasses a wide range of phenomena and overlaps with other fields of study, including philosophy (in particular, logic) and mathematics (algebra and set theory), and it is central to the study of literature, humor, gender, politics, advertising, and law.

We will see in this chapter that meaning can in fact be meaningless and that meanings can deviate from expected meaning but still be meaningful. How can that be? A good starting point for the discussion of word meaning is, in fact, to discuss what it means for a word or sentence to be meaningless.

## Making Meaning

We have seen in other chapters that even sentences made up of nonsense words have some kind of meaning. Consider this sentence:

She yarped that canzos spleeked the batoids.

We can tell that whatever the canzos are, they are doing something to the batoids, and whoever she is, she's yarping about that. We know that there is more than one canzo, more than one batoid, and that the yarping and spleeking happened in the past. All this information comes from the syntax and morphology of the words in the sentence. We therefore derive some meaning from this sentence even though we don't know what any of the words really mean.

Speakers would also probably conclude that the following sentence (invented by Noam Chomsky to illustrate the semantic phenomenon we are discussing here) is English but, again, is odd:

Colorless green ideas sleep furiously.

English speakers know that there is something deviant about this sentence and also something completely grammatical about it. This sentence is well formed in terms of syntax and morphology but odd because the meanings of the words don't fit together.

## Semantic Deviance

Sentences like *Colorless green ideas sleep furiously* are **anomalous**, which means they deviate from expected meaning. This sentence therefore

**anomaly** deviation from expected meaning

provides important evidence that the grammar of our language includes a system of meaning rules. Even though Chomsky's sentence breaks no syntactic or morphological rules, it breaks meaning rules. Our meaning rules are therefore somehow separate from (although they interact with) other rule systems in our grammar. Speakers of a language not only have complex knowledge of meaning that allows them to interpret words and sentences, assigning them grammatical meanings, but this knowledge also gives speakers the ability to recognize anomaly. Knowledge of meaning, then, is just like syntactic, morphological, and phonological knowledge in this way: we know what is grammatical and what is not, but lack of grammaticality doesn't always preclude us from coming up with some kind of interpretation.

To take another example, recall that we can understand child language, even though the grammatical rules the child employs may deviate from those of adult grammar, leading children to produce such sentences as *What time it is?* or *We holded the baby rabbits*. The first sentence deviates syntactically from the adult version, *What time is it?* in which the auxiliary verb *is* inverts with the subject *it*. The second sentence deviates morphologically from adult grammar by affixing *hold* with the past tense affix *-ed* rather than using the adult form *held*. We understand phonological deviations in child language as well when, for example, a child calls a *spider* a *pider* and a *spoon* a *poon*.

The same is true of semantic deviance: when we hear a child refer to a horse as a *dog*, we can probably figure out what the child means, just as when we hear someone make a slip of the tongue, saying, "You have too many irons in the smoke" instead of "You have too many irons in the fire." We often find such semantic errors amusing; in fact, humor is frequently based on deviations from expected meanings. Henriksson (2003: 54, 75) offers the following gaffes in his collection of errors made by college students in their history papers:

British paternalists were motivated by "noblesse oblique."  
St. Teresa of Avila was a Carmelized nun.

Often, such errors are created for comic effect and are referred to as *mala-propisms* (French for *mal à propos*), after Mrs. Malaprop, a character created by Richard Sheridan in his 1775 Restoration comedy *The Rivals*. Some examples, in lines uttered by the infamous Mrs. Malaprop:

. . . promise to forget this fellow, to *illiterate* him, I say, quite from your memory.

I have since laid Sir Anthony's *preposition* before her.

I'm sorry to say, Sir Anthony, that my *affluence* over my niece is very small.

Poetry is often based on deviations from expected meanings as well, as this poem by Shel Silverstein (1981) shows:

*What Did?*

What did the carrot say to the wheat?

“ ‘Lettuce’ rest, I’m feeling ‘beet.’ ”

What did the paper say to the pen?

“I feel quite all ‘write,’ my friend.”

What did the teapot say to the chalk?

Nothing, you silly . . . teapots can’t talk! (*Light in the Attic*, p. 16)

These deviations from expected meaning, whether expressed in slips of the tongue or child speech or designed for comic effect, all illustrate not only the complexity of meaning but also that our understanding of semantics includes knowledge of both meaning and anomaly.

RPE 9.1

## Lexical Semantics

In the ancient Western world, a central question about language was whether it is *natural* (not under human control) or *conventional* (under human control). In Plato’s *Cratylus*, Socrates, Cratylus, and Hermogenes argue at length over whether names of things are chosen by individuals, communities, or some higher “reality” outside human control. In the Bible, God charges Adam with naming all things, and in this way meanings are assigned to words. Such approaches to word meanings, however, assume a monoglot (single-language) view of the world and do not take into account evidence from other languages. From such evidence, we find that the connection between a word and its meaning is *arbitrary*: there is no intrinsic reason why the word *dog* best represents the meaning we attach to it. In French, this animal is a *chien*; in German, a *Hund*; and in Japanese, an *inu*. This arbitrariness is reflected not only across languages but also within a particular language; a speaker from Alabama might put things in a *poke*, but a speaker from Montana would use the term *sack*, and a speaker from Wisconsin, *bag*.

Nevertheless, there is a class of words for which the connection between sound and meaning is nonarbitrary—namely, onomatopoeic words (*onomatopoeia* is Greek for ‘name making’), words that sound like their meanings. These words are also called *echoic* words.

buzz, clang, splash, purr, kapow, boom

moo, cock-a-doodle-do, oink oink

Though there are some interesting similarities among onomatopoeic words across cultures (cows in Turkish, Greek, Albanian, Estonian, French, Hebrew,

and English all say something very much like *moo*), much cross-cultural variation in onomatopoeia still exists. In Albanian, a horse says *hihi hi* but in Finnish, *ii-hahahaha*; in Korean, *hi-hing*; and in Hindi, *hin hin hin*. In English, horses *neigh* and *whinny*. Though a Portuguese rooster says *cocorococo*, a Russian one says *ku-ka-re-ku*, and a Thai one says *ake-e-ake-ake*. Onomatopoeia nevertheless is a useful way to use sound to *suggest* meaning, and many authors invoke onomatopoeia for just this purpose.



Hear the sledges with the bells—  
Silver bells!  
What a world of merriment their melody foretells!  
How they tinkle, tinkle, tinkle,  
In the icy air of night!

From “The Bells” by Edgar Allen Poe

The pronunciation of onomatopoeic words can provide clues to their meanings (so Poe uses *tinkle* here instead of *clang* to suggest a light, merry sound), though this relationship between sound and meaning is still somewhat arbitrary. We can gather other clues about meaning from the morphology of a word and also from its syntactic position. We also use *etymological* clues to unlock meaning—we draw on our knowledge of the origins of words and of *cognates*: words that have common ancestors such as *Hund* in German and *hound* in English. (We discuss cognates in more detail in Chapter 11.) *Context* also provides important clues to meaning, and we draw on our knowledge of the world and our experience to unlock meanings of words we don’t know (meaning constructed from context is discussed in the next chapter).

## RPE 9.2

Suppose, for example, that you hear the following sentence, and you don’t know the meaning of the word *defenestrated*.

About to be caught in the act, the burglars defenestrated the jewelry.

Even if you don’t already know what *defenestrated* means, you can pick up some clues from morphology and syntax. You know that the word is a verb because of its position, and you know that it is in the past tense because of the *-ed* inflectional suffix. Its *-ate* derivational suffix also tells you this word is probably a verb. You might also figure out that it means to not *fenestrate* in some way because of the negative prefix *de-*, which you might recognize as similar in meaning to the *de-* in *declaw* and *deforestation*. Some of you may infer that *defenestrate* has something to do with windows, based on etymological information: you may know that ‘window’ in French is *fenêtre*, and you might also be familiar with the cognate words *Fenster* in German or *fenestra* in Latin. Context can also help us determine the meaning of a word. For example, the following sentences includes more information about what



happens when one *defenestrates*, helping us infer that *defenestrate* means ‘to fall out of a window’.

About to be caught in the act, the burglars defenestrated the jewelry.

The heavy sack fell two stories and landed on the lawn, spilling its contents into the bushes.

Your knowledge of the world tells you that in order for something to fall two stories, it must fall from a building, and it would typically fall out of a window or perhaps off a balcony. The reference to a lawn suggests the burglars are in a house. Thus, you may conclude that *defenestrate* means ‘to throw from a window’, which would be correct.

So, sometimes we make meaning out of words we don’t know, using various clues and strategies and a variety of semantic rules. The formal study of the conventions of word meaning is called **lexical semantics**.

#### lexical semantics

formal study of the conventions of word meaning

RPE 9.3

## Meaning Classifications: Semantic Features

Some aspects of meaning can be represented in terms of oppositions expressed by binary features. These features allow us to divide words into different semantic categories. For example, part of our understanding of words includes our understanding of **semantic features** inherent in many words, features such as [+/-human], [+/-animate], [+/-young], [+/-married]. To illustrate, consider the following sentences, all of which are in some way semantically deviant but otherwise completely well formed.

The *bachelor* is married.

The *baby* drove to town in a Ford pickup.

The *rock* combed its hair.

We understand the oddity of the first sentence to follow from our understanding of the word *bachelor* as [–married]. The second sentence is strange because *baby* is [+young] and only adults, typically, drive. The third is bizarre because humans, not rocks, comb their hair, so we expect the subject of *comb* to be [+human]. In each of these sentences, then, inherent semantic features have a grammatical function or effect.

#### semantic features

classifications of meaning that can be expressed in terms of binary features

[+/-], such as  
[+/-human],  
[+/-animate],  
[+/-count]

## Noun Classes

In addition to the nouns we’ve considered so far, verbs, adjectives, and other syntactic categories of words can be divided into semantic classes. *Go* and *chase* are both verbs of motion, for example, but differ in that only *chase* implies pursuit of something. Part of the study of semantics

involves analyzing and describing such semantic classifications. In this section, we will explore the semantic features of nouns in yet more detail to give you an idea of how semantic features interact with other principles of grammar.

## hwæt!

In British English, *mathematics* is shortened to *maths* rather than *math*, though it's still a mass noun: 'maths is fun!' But in French, the related word *les mathématiques* is morphologically plural: *les mathématiques sont amusantes!*

**Concrete and abstract nouns** Concrete nouns are names for things in the physical world (they name things we can point at). Abstract nouns are not physical objects.

*concrete*: dog, car, the Empire State Building, rice

*abstract*: love, attitude, terrorism, indignation

Some words have two (related) meanings and can, therefore, belong to more than one category; *light*, for example, is both abstract (*I need more light! The light in the eastern sky is purple.*) and concrete (*Turn on the light.*).

**Count and noncount nouns** Count nouns are those that we can, well, count. Count nouns can therefore be pluralized, preceded by numerals and certain quantifiers such as *each*, *both*, *every*, *few(er)*, and *several*. Noncount nouns cannot be pluralized, nor can they occur with numerals or the quantifiers just listed. They can, however, occur with quantifiers *much*, *most*, *all*, and *less*.

*count nouns*: dog, car, puppy, country

*noncount nouns*: rice, jewelry, furniture, fruit, love, terrorism, mud, indignation

Some noncount nouns in U.S. English are morphologically plural, a relationship that we can also see reflected by the verb through subject–verb agreement.

mathematics/ethics/linguistics *is*/\**are* fun to study.

Notice that many nouns can be both count and noncount. For example, beer and paper can be count or noncount.

Etienne drank six *beers*. Etienne likes *beer*.

Etienne bought six *papers*. Etienne bought *paper*.

## RPE 9.4

**Common and proper nouns** Common nouns are nouns that have more than one *referent*, or entity to which the noun refers. Proper nouns, on the other hand, have only one referent; they are the names of unique entities.

*common*: tulip, baseball, brother, horseradish, language, school, anger

*proper*: Etienne, Harry Potter, the Kentucky Derby, Halloween, Lake Victoria, the Kremlin

# Language Alive!

## Is the Team Playing? Are the Team Playing?

Collective nouns name groups that act as a single unit of some kind, such as *team*, *family*, *committee*, *herd*, *fleet*, *group*, and *class*. In U.S. English, such nouns are count nouns and can be pluralized: *teams*, *families*, and so on.

The team *is* going to win.

The teams *are* going to win.

Six teams *were* at the competition.

In most dialects of British English, on the other hand, collective nouns are semantically plural but not morphologically so. That is, collective nouns lack a plural suffix *-s*, but subject–verb agreement is plural, not singular. The same is true of singular “nouns of multitude,” (referring to the German soccer team as *Germany*, for example).

The team *are*/\**is* going to win.

The Royal Family *live*/\**lives* in Buckingham Palace.

Germany *are* in first place.

Interestingly, several U.S. athletic teams have names that are treated as “nouns of multitude” in the British way by those in the sports community. (You may or may not be aware of this usage, depending on your familiarity with sports.) These nouns are morphologically singular but (always) semantically plural, triggering plural subject–verb agreement.

The Utah Jazz *\*is/are* going to play tonight.

The Seattle Storm *\*is/are* an excellent basketball team.

Sometimes the same word can function as both a proper and a common noun. Proper nouns have only a single referent and therefore can't be plural, so they are by definition count nouns (because there is only *one* of them). So, if someone says, “I just saw Etienne at the movies,” the proper noun *Etienne*, which refers to a particular person, is also a count noun: there is one *Etienne* to which this noun refers. In the sentence *I know many Etiennes*, *Etienne* is arguably no longer a proper noun but a common (count) noun because it refers to a member of a set of more than one.

### RPE 9.5

#### entailment

inclusion of one aspect of a word's or sentence's meaning in the meaning of another word or sentence

## Entailment and Markedness

Semantic features can also be useful in expressing **entailments**, or the inclusion of one aspect of the meaning of one word in the meaning of another word. For example, the word *man* has the semantic features

[+human, +male, +adult], and the meaning of the word *bachelor* includes the features [+human, +male, +adult, –married]. The meaning of *bachelor* thus overlaps—or more specifically, *entails*—the meaning of *man*. We will return to entailment in later sections because it is part of other semantic relationships among words.

Though all languages share certain semantic features (animate/inanimate, human/nonhuman), not all languages divide words into the same semantic categories. For example, in Swahili, which is a Bantu language spoken in Africa, nouns are divided into about thirteen classes according to morphological and semantic criteria. Trees, plants, and nature fall into one class; names of human beings and names of animals into another; and names of fruits, mass nouns, everyday life objects, persons, and names of Arabic origin into another. In Navajo, a member of the Athabaskan language family, nouns are also divided into different semantic classes, including animate, round object; long, stiff object; and granular object.

Some problems arise with defining meaning in terms of semantic features alone when we consider a wider range of examples. One problem with semantic features is that binary oppositions by definition depend on positive and negative values. An obvious case where this becomes problematic is in the feature specification of biological sex as [+/-male]. This specification assumes that biological sex is binary, an opposition that fails to account for a more complex and inclusive view of biological sex that includes, for example, transgendered people. Another issue that arises with this feature specification is that gender can be expressed only in positive/negative terms, with *female* as negative, [–male], and *male* as positive, [+male], which is inconsistent with social attitudes about gender equity. Nor do binary features necessarily capture socially defined meanings, which can carry positive or negative connotations. For example, consider the different feature specifications of the opposition *spinster/bachelor*:

spinster	=	[+adult, –married, –male]
bachelor	=	[+adult, –married, +male]

The only distinction between these terms is the feature of maleness or lack thereof. However, we are all familiar with the negative connotations of *spinster* and the positive connotations of *bachelor*, a socially defined distinction that is not captured by semantic features.

A case in which semantic features are actually defined in terms of social attitudes is illustrated by *nurse/male nurse*. The opposition between *nurse* and *male nurse* suggests that for many people *nurse* is specified as [+female] (or as [–male]) based on social expectations and that the adjectival modifier *male* is required in order to indicate a deviance from the typical interpretation of the term. The semantic feature for which *nurse* is specified is therefore based on cultural expectations about career paths for women rather than on grammatical properties.



**markedness**

opposition that differentiates between the typical form of a word and its “marked” opposite (“right” is unmarked, and “left” is marked)

Similarly, we all “know” a number of oppositions that are not clearly explained by binary features and that can have positive and negative social values attached to them. The idea of **markedness** can help us describe just such distinctions. Markedness occurs in phonological, morphological, syntactic, and semantic relationships, defining them in terms of marked and unmarked opposites; the dominant term is known as the unmarked term and the secondary term as the marked one. This concept of asymmetry has been extended to the analysis of sets of linguistics concepts and to grammatical constructions, and it has also been applied to various cultural relationships as well, with background cultural categories. Markedness has been the subject of much discussion in linguistics. (See, for example, Battistella 1990, 1996.)

In semantic relationships, markedness is based on how we consider one member of a pair of words “typical” and the other “marked.”

right/left, white/black, rich/poor  
knife/fork, salt/pepper

In English, the term *nurse* is unmarked (based on cultural expectations); the term *male nurse* deviates from the typical meaning of *nurse* and is marked.

It is probably impossible to explain all the nuances of meaning in terms of binary features; nevertheless, the semantic features that do have a grammatical function must be part of our mental lexicon. How this information is encoded in our lexicons is unclear; do we, for example, list *Mom* (*Mom went to work today*) as a proper noun and also as a count noun (*All the moms were at the game*), or do we simply know a rule that allows us to make proper nouns count nouns? And how are gendered words listed in our lexicons? How does culture affect the meanings of those words and how they are stored? We won’t attempt to answer these questions here but will simply point out the complexity involved in understanding what words mean.

## Meaning Subclassifications: Semantic Fields

**semantic fields**

basic classifications of meaning under which words are stored in our mental lexicons (FRIENDS, for example)

Another thing we know about word meaning is that words can be divided into semantic categories called **semantic fields**. Semantic fields are classifications of words associated by their meanings. There is a great deal of evidence that words are stored in semantic fields in our mental dictionaries. Semantic fields could be CLOTHING, PARTS OF THE BODY, EMOTIONS, OLD BOYFRIENDS; the fields may vary across speakers, and words may belong to more than one category. The meaning of the word *pig* in the semantic field FARM ANIMALS overlaps the meaning in the semantic field MEAT and even (possibly) PETS.

Slips of the tongue provide interesting evidence for semantic fields. The word substituted for the intended word in the following slips of the tongue

is a semantically related one (adapted from the Fromkin Speech Error Database):

#### Intended Utterance

he's going *uptown*  
 you have too many irons  
     in the *fire*  
 that's a horse of another *color*

#### Actual Utterance

he's going *downtown*  
 you have too many irons  
     in the *smoke*  
 that's a horse of another *race*

See the link on the Max Planck Institute for Psycholinguistics website: [http://www.mpi.nl/cgi-bin/sedb/sperco\\_form4.pl](http://www.mpi.nl/cgi-bin/sedb/sperco_form4.pl).

The semantic field including both *up* and *down* might be DIRECTIONS; for *fire* and *smoke*, THINGS HAVING TO DO WITH FIRE, and so on. Speakers rarely, if ever, make random substitutions when producing a slip of the tongue (though we know from other chapters that some slips are phonetic, some phonological, and some morphological, as well as semantic).

In addition to slips of the tongue, aphasia provides us with evidence of how words might be stored in the brain. Many people who suffer from aphasia (language deficit as the result of trauma to the brain, introduced in Chapter 2) suffer from lexical access problems and are not able to produce the word they intend but often select a related word—for example, *table* for *chair*, *boy* for *girl*, *knife* for *fork*—suggesting that words that are semantically related are stored together in the brain.

#### RPE 9.6

## Meaning Relationships: The Nyms

**nyms** meaning relationships among words—antonyms, synonyms, homonyms, etc.

Part of knowing the meaning of a word includes knowing the semantic relations among words. These same relationships, which we'll call **nyms**, exist across languages.

### Opposite Meanings: Antonymy

**antonyms** words that we think of as opposites, though oppositions may be relational (*doctor/patient*), complementary (*alive/dead*), or gradable (*hot/cold*)

We all learn, early on, that *rich* is the opposite of *poor*, *awake* is the opposite of *asleep*, and *teacher* is the opposite of *student*. These opposites, or **antonyms**, seem based on fact: if you are rich, you can't be poor; if you are awake, you can't be asleep; and in class, the “opposite” roles of teacher and student seem well defined and obvious. (If you ask someone what the opposite of *pepper* is, they'll probably say *salt*.) Nevertheless, there are important differences among these pairs. Some antonyms are *gradable*; that is, the antonyms are two ends on a scale, and there can be various gradations of each term. So, what is considered *rich* or *poor* varies from person to person.

What *rich* means to Tevye in the musical *Fiddler on the Roof* as he sings “If I Were a Rich Man” is quite different from what *rich* means to Donald Trump; for someone who used to weigh 300 pounds, weighing 200 pounds might

Table 9.1 Antonym Types

Gradable	Relational	Complementary
smart/stupid	teacher/student	dead/alive
often/rarely	friend/enemy	before/after
fat/thin	question/answer	permit/prohibit
most/least	doctor/patient	precede/follow
up/down	mother/father	send/receive
tall/short	parent/child	beginning/end
rich/poor	lawyer/client	day/night

## hwaet!

Some words can have two diametrically opposed meanings: *cleave* can mean either to adhere closely or to divide. Look up some other “contra-nyms”: *sanction*, *oversight*, *moot*.

RPE 9.7

RPE 9.8

be thin, but not everyone would share this interpretation. These antonyms therefore express degree in various ways: by comparative and superlative morphology (*smarter*, *thinner*) or syntactically (*more gigantic*, *extremely minuscule*). *Complementary antonyms* are another subtype of antonymy: if you are one, you cannot be the other; these are “absolute” opposites. That is, if you are dead, you cannot also be alive; if you are asleep, you are not awake, and so on. Similar pairs of this sort include *legal/illegal* and *beginning/end*. *Relational antonyms* are a third type; these are pairs in which each member describes a relationship to the other: *teacher/student*, *father/mother*, *lawyer/client*, *doctor/patient*. All languages have antonyms as well as these subtypes of antonyms. (See Table 9.1.)

## Did You Know...?



### Can Something Be Very Dead?

Although it may seem obvious that *dead* and *alive* and other antonyms are complementary, it doesn't mean we always use them that way. We say such things as “Downtown is completely dead by 8 p.m.” and “That plant is quite dead” and “She's *really* pregnant,” where we modify *dead* and *pregnant* with degree words even though these adjectives by definition should not be modifiable (because you either are or aren't dead or pregnant). We also say *very unique*, a phrase that rubs many language purists the wrong way but which is nevertheless quite common even among the most educated speakers. Our colleague Eric Hyman explains such examples as morphosyntax “outranking” meaning—adjectives can always take degree words precisely because they are adjectives. Our unconscious knowledge of lexical categories allows us to use degree words with adjectives regardless of prescriptive, meaning-based edicts.



## Similar Meanings: Synonymy

**synonyms** words that have similar meanings (*purse/handbag*)

Words that are different in form but similar in meaning are called **synonyms**. Synonyms are derived from a variety of sources, and we make choices among synonyms for a variety of reasons.

One source of synonyms is dialectal variation. In some dialects of North American English, a long, upholstered seat is called a *couch*, but speakers of another dialect call the same piece of furniture a *sofa*. Canadian English speakers might call this item a *chesterfield*, and still other speakers might call it a *divan*. Though these words all mean the same thing and are therefore synonyms, they tend to be dialect specific and may not be shared across dialect boundaries.

Synonyms can also cross dialect boundaries; most North American English speakers are familiar with the synonyms *professor/instructor*, *doctor/physician*, and *lawyer/attorney*. Still other synonyms arise as a result of language change over time. For example, your grandparents might use a particular term that seems old fashioned to you, and you might use a more modern

term. For example, what might be a *pocketbook* for your grandmother is called in current fashion circles a *handbag* or a *bag* or a *purse*. An older term for *dress* is *frock*, and what used to be called a *baby carriage* or *perambulator* is now a *stroller* or *jogger*; we are less likely now to refer to women as *gals*.

Two other, closely related sources for synonyms are style and register. In casual speech, a speaker might say, “That’s a nice ride,” but in more formal speech, “That’s a nice car.”

For a variety of historical reasons (discussed elsewhere in this book), we attach social value and prestige to words with Latin or Greek roots. We therefore might choose a Latinate synonym over its native English (Anglo-Saxon) counterpart in formal, academic writing. Table 9.2 shows some pairs of synonyms or at least close synonyms. (Exact synonyms are quite rare.)

hwæt!

Isn’t it fun when antonyms come to be synonyms? *Bad* is bad and it’s good. It’s bad to be sick, but *sick* can mean ‘good’.

RPE 9.9

## Euphemisms

English has a vast number of synonyms, more than most languages, largely because of borrowing from other languages, especially French and Latin. Though synonymy allows for a variety of ways to express ideas, it can also be the source of **euphemisms**. Euphemisms are words and phrases used to avoid offending (by directly addressing taboo subjects) or to deliberately obscure actual (usually unpleasant) meanings. Government terminology provides a good source of examples. *Area denial munitions* are ‘landmines’, and *physical persuasion* means ‘torture’. *Operational exhaustion* means ‘shell shock’, and *wet work* is ‘assassination’. We use euphemisms to avoid talking about bodily functions: *sweat* can be replaced by *perspire*, *genitalia* by *privates*, and *urinate* by *go to the bathroom*. Still another source of synonyms

**euphemism** word or phrase used to avoid offending or to purposely obscure (*collateral damage* for ‘civilian deaths’)



Table 9.2 Synonyms of Anglo-Saxon and Latin/Greek Origin

Anglo-Saxon Origin	Latin/Greek Origin
land	alight
try	attempt
hard	difficult
talk (about)	discuss
crazy	insane
ghost	spirit
clean	sanitary
dirt	soil
go	advance
see	visualize
holy	sacred
space	cosmos
heavenly	celestial

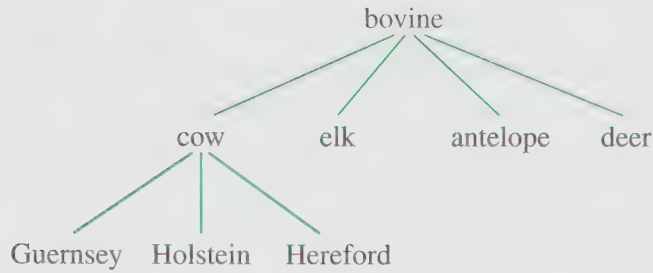
is *politically correct language*, terminology specifically intended to limit use of certain terms in favor of more socially and culturally acceptable ones in public discussion. Common examples include *Native American* for *Indian*, *firefighter* for *fireman*, *differently abled* rather than *disabled* or *handicapped*, and *mail carrier* rather than *mailman*. The use of politically correct language can be the source of some controversy because politically correct terms can be—not surprisingly—political, which raises questions about the accuracy of their meanings and the implications of those meanings.

## RPE 9.10

**hyponym** word whose meaning is included, or entailed, in the meaning of a more general word (*tulip/flower*)

## Meaning Categories: Hyponymy

Another word-meaning relationship is hyponymy. A **hyponym** is a word whose meaning is included, or entailed, in the meaning of a more general word. For example, *thoroughbred* is a hyponym of *horse*, and *house* is a hyponym of *building*. A hyponym can itself have hyponyms, as shown in this diagram:



The entailments expressed by hyponymy can be illustrated as follows:

Guernseys are cows.

Bossie is a Guernsey.

Bossie is a cow.

Hyponymy expresses how we assign meaning to larger categories and to smaller categories included in these larger ones. We use hyponymy in language to make general statements more specific:

What are you reading?

A book/a Russian novel/*War and Peace*

RPE 9.11

## Related Meanings: Polysemy

**polysemy** refers to words with two or more related meanings (*lip* = of a cliff or part of the mouth)

Words that are **polysemous** have two or more related meanings (Greek *poly* ‘many’, *semy* ‘meanings’). For example, *lip* is polysemous because we can use it not only to refer to a part of one’s mouth but also in phrases such as *lip of the cliff* or the *lip of a cup*, and we also have the expression *don’t give me any lip*. We call a furry, burrowing animal a *mole*, and *mole* can also refer to a spy who pretends to be a legitimate member of the group on which he or she is spying. *Foot* is polysemous as well: in addition to meaning ‘the lowest part of the body’ (with the top being the *head*), we have *foot/head of the bed*, as well as *foot of the stairs* and *foot of the mountain*. Body parts are often polysemous; we use *leg* to refer to the leg of a chair and the leg of a table, *arm* to refer to the arm of a chair, and *eye* to refer to the eye of a storm. We return to a discussion of polysemy in the section on figurative language; most polysemy makes use of figurative, or nonliteral, meanings.

**retronym** new word or phrase created to distinguish an original word from a more recent meaning of the word (*analog watch*/ *digital watch*)

Another meaning relationship, which can perhaps also be considered a type of polysemy since the two terms have related meanings, is also called a **retronym**. A retronym is a new word, compound word, or phrase created to distinguish an original word from a more recent meaning of the word: for example, *analog watch* to distinguish from *digital watch*, *acoustic guitar* to distinguish from the newer *electric guitar*, or *film camera* to distinguish from *digital camera*.

RPE 9.12

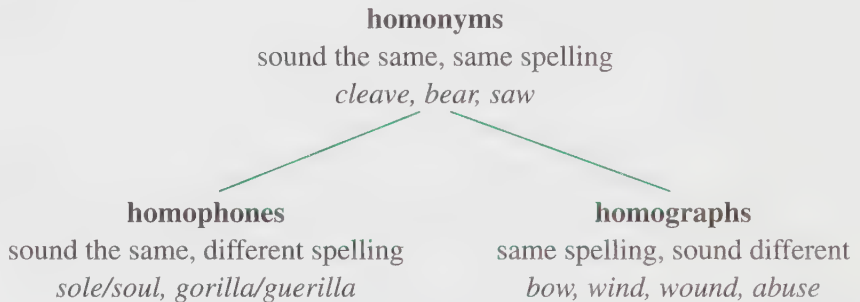
**homonyms** words with the same sound and spelling but different, unrelated meanings (*saw/saw*)

**homophones** words that do not share the same spellings or meanings but sound the same (*sole/soul*)

**homographs** words that have the same spelling, different meanings, and different pronunciations (*bow/bow*)

## Different Meanings: Homonymy

Words that sound the same but have different (unrelated) meanings are called **homonyms** (Greek *homeos* ‘same’, *onoma* ‘name’). The verb *bear* can mean ‘to have children’ or ‘to tolerate’. So, *She can’t bear children* is ambiguous because *bear* is a homonym. **Homophones** do not necessarily share the same spelling (*sole/soul*, *gorilla/guerilla*, *to/too/two*), but they sound the same; **homographs** have different meanings, the same spelling, but different pronunciations (the *bow* of a ship versus a *bow* and arrow).



### RPE 9.13

## Many Meanings: Lexical Ambiguity

We’ve already talked about how sentences can be ambiguous; the following example of syntactic ambiguity is explained by two different phrase structure trees. No actual words in this sentence are ambiguous.

Six hungry gorillas spotted the sandwiches in the tree.

Polysemes and homonyms are therefore, by definition, ambiguous because both polysemes and homonyms have more than one meaning. For example, the sentence *She met a guerilla* is ambiguous (in speech) because of the homonyms *gorilla/guerilla*, and the sentence *The area around the mouth is rather uninteresting* is also ambiguous because of the polysemous *mouth* (human or river or cave). In speech, then (where spelling can’t offer clues to meaning), we must rely on context to decipher ambiguity. Clues can be nonlinguistic (pragmatic): if we were to hear the sentence *The area around the mouth is rather uninteresting* in a classroom with someone pointing at a map of the Mississippi River, the sense of *mouth* would be quite clear. Clues can also be linguistic: were we to hear the sentence *She met a guerilla* with a linguistic clue attached, as in *She met a guerilla, and he has a Ph.D.*, we would infer that the guerilla in question is not only male but human rather than simian.

## Vagueness

Ambiguity is different from vagueness, though the difference between the two can sometimes be hard to see. One way to think about it is that an

LINGUISTICS  
IN THE NEWS

## Talking Right . . . and Left

Linguistic analysis of political discourse has come more and more into the public eye. Two linguists in particular have received a lot of press. Geoffrey Nunberg, “the NPR linguist,” appears regularly on National Public Radio’s *Fresh Air* with Terry Gross, often discussing the language of politics. George Lakoff, professor of linguistics at UC Berkeley, is well known for his work on metaphor and is also founder of the progressive think tank The Rockridge Institute. Both linguists’ work has appeared in a number of publications, including the *New York Times*.

In his book *Talking Right*, Nunberg looks at the language of conservatives and liberals—the political Right and the political Left. The conservative Right, he claims, is more skilled than the liberal Left in coining catch-phrases and shaping convincing political discourse. Two examples are conservatives’ use of *climate change* instead of *global warming* and *death tax* instead of *estate tax*. He also argues that conservatives are more successful at

shaping public interpretations of core vocabulary: *values* really means ‘conservative values’, for example.

In his book *Moral Politics*, George Lakoff suggests that his ideas about the mind and its conceptual structure are central to understanding the political process and political views. Like Nunberg, Lakoff believes that the Left is linguistically less powerful in its message than the Right. Lakoff has been an advisor to the Democratic Party, so his analysis and proposals are gauged to help the Democrats develop their message and to frame the political debates.

Nunberg’s and Lakoff’s work shows that the study of political language has gone far beyond anecdotal observation. This use of language can now be tracked in online discussions, press databases, broadcast transcripts, and even advertising. Linguists can now analyze and document this body of evidence, construct hypotheses about it, and even test their hypotheses against additional evidence. The work

of these linguists illustrates an important way in which linguistic science can shed light on our everyday lives and shows how linguists themselves are increasingly entering the domain of public discourse.

For more information

Lakoff, G. 2002. *Moral politics: How liberals and conservatives think*. Chicago: University of Chicago Press.

Lakoff, G. 2006. Staying the course right over a cliff. *New York Times*. October 27. [http://www.nytimes.com/2006/10/27/opinion/27lakoff.html?\\_r=1&oref=slogin](http://www.nytimes.com/2006/10/27/opinion/27lakoff.html?_r=1&oref=slogin)

Nunberg, G. 2004. Political language. *Fresh air*. National Public Radio. September 1. <http://www.npr.org/templates/story/story.php?storyId=3883628>

Nunberg, G. 2006. *Talking right: How conservatives turned liberalism into a tax-raising, latte-drinking, sushi-eating, Volvo-driving, New York Times-reading, body-piercing, Hollywood-loving, left-wing freak show*. New York: Public Affairs.

ambiguous word has more than one possible meaning and that (as with *mouth* and *guerilla*) the appropriate meaning is quite obvious, given a context. *Vague words*, on the other hand, aren’t so easily clarified by context. In fact, what it means for a word to be vague is rather, well, vague. *Vague* is defined in dictionaries as ‘obscure’, ‘undefined’, or ‘lacking in clarification’ and is the subject of much discussion in philosophy. We therefore won’t pursue a precise definition of vagueness here because it is actually quite complicated. Rather, we’ll provide one example of a linguistic argument for



distinguishing vague words from ambiguous ones; it involves VP deletion, which we talked about in Chapter 8. Remember that VP deletion has the effect of deleting a VP that refers to an identical antecedent VP.

## hwæt!

The Sorites paradox (from the Greek word for ‘heap’) stems from the inability to define a thing precisely and can be applied to syntactic vagueness; for example, when grains of sand are removed from a heap of sand, at what point does it stop being a heap? When does blue stop being blue? Or old, old? Or young, young? Many words involve such vagueness.

Mary bought a Ferrari, and John *did Δ, too*.

Speakers interpret the phrase *did Δ, too* as identical in meaning to a previous phrase: *bought a Ferrari*.

Kempson (1977) made up a test using VP deletion to distinguish ambiguous words from vague ones. Consider what happens when we construct sentences with *did Δ, too* and ambiguous words:

The student pointed at the mouth, and the teacher *did Δ, too*.

Here, whichever interpretation of *mouth* jumps into your mind (mouth of a river or a human mouth, say), the phrase *did Δ, too* must have the same interpretation. That is, the sentence can mean (a) or (b) but not (c) (where \* indicates an unacceptable sentence).

- a. The student pointed at the mouth (of the river), and the teacher *did, too* (pointed at the mouth of the river).
- b. The student pointed at the mouth (human), and the teacher *did, too* (pointed at the human mouth).
- c. \*The student pointed at the mouth (of the river), and the teacher *did, too* (pointed at the human mouth).

When words are simply vague, such an interpretation, where the meaning of an ambiguous word must match that of the *did too*-phrase, is not required. For example, the verb *contact* is not ambiguous but just vague, as illustrated in the following examples:

Margaux contacted him (by phone, e-mail, post, telepathy).

Margaux contacted him (by phone) and Sue *did Δ, too* (by e-mail).

RPE 9.14

## Meaning Change: Semantic Shift

**semantic shift**  
change in the  
meaning of words  
over time

**shift in connotation**  
change in words’  
general meanings  
over time

So far, we’ve talked about some of the meaning relationships among words. Here, we turn to how word meanings (and thus their meaning relationships) can change over time. These **semantic shifts** happen in a variety of (sometimes overlapping) ways. They can be **shifts in connotation**, or changes in general meanings associated with a word. In Old English, the word *Hund* meant ‘dog’, but in modern English, *hound* refers to a particular type of dog. This process is called **narrowing**. In Old English, *gōme* meant ‘jaw, palate, inside of the mouth’, but the meaning narrows in Middle English, in which *gome*

**narrowing** change in words' meanings over time to more specific meanings

**broadening** change in words' meanings over time to more general or inclusive

**amelioration** shift of words' meanings over time from neutral or negative to positive

**pejoration** shift of words' meanings over time from neutral or positive to negative

**shift in denotation** complete change in words' meanings over time

means 'gum'. In Early Modern English, the word *acorn*, which formerly meant 'fruits', narrows to 'fruit of an oak tree', and *courage*, which meant 'heart, mind, disposition, nature, bravery, valor', narrowed to 'bravery, valor'.

The Old English word *dogge*, on the other hand, referred to a particular breed of dog and today refers to domestic canines in general, through a process called **broadening**. In Old English, *bridd* meant 'young bird', but the meaning of this term broadened in Middle English, and *bird* came to mean 'fowl of any age'. (Note the phonological *metathesis* that occurred here, too: *bridd* → *bird*.) The word *twist* used to mean 'twig, tendril, or branch', but after the seventeenth century, its meaning broadens to mean 'the action of twisting something', and 'anything that has been twisted' (such as a slice of lemon, a wire, yarn). *Decimate*, for the Romans, meant 'to kill every tenth person', but now its meaning has broadened to mean 'destroy, utterly wipe out, annihilate'.

Word meanings also undergo **amelioration**, a shift to a more positive connotation. The word *croon*, for example, which in English means 'to sing softly', comes from Dutch *kronen*, which means 'to groan or lament'. Word meanings can also undergo **pejoration**, shifting to a more negative connotation. The Old English word *ceorl* meant 'peasant, freeman, layman', but during Middle English degenerated in meaning; it occurs in Present-Day English as *churl*, 'a rude or ill-bred person'.

Words can also **shift in denotation**, eventually shifting to mean something else entirely. For example, *blush* used to mean 'look' or 'gaze'. In Early Modern English, this word came to mean 'to redden in the face (from shame or modesty)'. The term *moody* in Old English meant 'brave' and now means 'given to changeable emotional states'. Although the current meaning of a word may not seem related at all to its original meaning, such shifts are usually not arbitrary. The modern English word *bead* comes from the Old English word *gebed* 'prayer'. The shift in meaning here came from beads threaded on a string to count prayers (a rosary), but without knowledge of the word's history, *bead* and *prayer* seem completely unrelated in meaning.

In the morphology chapter, we discussed how we bring new words into the language through the morphological processes of coining, blending, compounding, clipping, and so on. We are equally creative in assigning new meanings to words or shifting meanings of words in the ways just outlined. Some current innovations are *bad* for 'good' and *sweet* for 'exceptional'. *Awesome*, which used to mean 'inspiring awe' or 'full of awe', usually means in current speech 'remarkable, great, fantastic'. Though shifts in meaning are inevitable, change can sometimes cause some confusion. For example, *aggravate*, which originally meant 'to worsen', is often now used to mean 'irritate'; *anxious*, which meant 'filled with anxiety', is now used to mean 'eager'. Because these changes are not complete—and many people still have only the first meanings—confusion and lack of precision of meaning may result. When one meaning truly takes over the other, the language changes.

RPE 9.15

RPE 9.16

RPE 9.17

## Making New Meanings: Figurative Language

**figurative language**  
nonliteral language;  
language that shifts  
meaning from the  
primary meaning of  
the word

Often, particularly in discussions of literature, we talk about language being **figurative**, or expressing *nonliteral* meanings, meanings that do not conform to the *primary meaning* of a word. Primary meanings of words are listed first in dictionary definitions and are the most typical or common meanings we associate with a word. And though we may think that the use of figurative language is confined to stories and poems, in fact, *most* of our everyday language use is nonliteral, from what we say in casual conversation to what we hear in a weather report on the news to political speeches. We think of objective writing and speaking, conveying “just the facts,” as less figurative than literary language. On some level, this might be true, but as C. S. Lewis points out in his short treatise on language, *Studies in Words* (1990), “By his metaphor [discussed in next section] the speaker is trying to communicate what he believes to be a fact.” That is, we can still express “facts” figuratively. When we say “He was madder than a hornet” or “I bombed that test,” we are using nonliteral meanings of *hornet* and *bombed*. And what about when we say “Why the long face?” We aren’t commenting on the length of someone’s jaw but rather on their mood; and when we say “I see what you mean,” we are using *see* to mean ‘to understand’ rather than ‘to perceive with the eye’.

## Language Alive!

### Shifts in Meaning: Progress or Decay?

Though semantic shift is inevitable and very common, some language purists see it as a kind of language decay. Two examples of shifts that are often thought of this way are *imply/infer* and *affect/effect*. The verb *imply* traditionally meant ‘to suggest without explicitly stating’, and *infer* meant ‘to arrive at a conclusion based on evidence.’ So, when someone says, “We’d better go,” he or she is *implying* that it is time to leave. If someone says, “I missed my bus,” you can *infer* that he or she did not get to the bus stop on time. Due to their similarity in meaning, *imply* and *infer* are often used interchangeably. And *affect* and *effect*? The verb *affect* (with stress on the second syllable) traditionally meant ‘to influence’, as in ‘The new process affects how we make cheese.’ The verb *effect* means ‘to create’, as in ‘The new process will effect a change in how we make cheese.’ The fact that these words are pronounced identically by most speakers contributes to their tendency to be used interchangeably. Also, both words can be nouns with different meanings, but we don’t mix these up as often as we do the verbs, though we do often misspell them.



Many writers are even commended for their use of figurative language to convey scientific (and presumably objective) ideas. Physician Lewis Thomas, well known for his lyrical essays on the human condition, describes the relationship between sea anemones and crabs in the following way:

The anemones who live on the shells of crabs are precisely finicky; so are the crabs. Only a single species of anemone will find its way to only a single species of crab. They sense each other exquisitely, and live together as though made for each other. (1979: 4)

By describing the relationship between sea anemones and crabs figuratively, Thomas conveys not just his thoughts on the habits of marine creatures but also his thoughts on human relationships.

Contrast Thomas's description of the behavior of the sea anemone with the following description from *The Columbia Electronic Encyclopedia* (2005), which is more technical and relies on primary meanings:

Most sea anemones attach temporarily to submerged objects; a few thrust themselves into the sand or live in furrows; a few are parasitic on other marine organisms . . .

It might be argued, then, that the distinction between figurative language and objective, factual language is rather fuzzy, and it is perhaps not surprising that the linguistic properties of figurative language are a topic of some debate. For Aristotle, figurative language is a rhetorical device that is distinct from the standard use and meaning of language. Philosopher John Searle takes a similar view in his 1979 article "Metaphor." For the Romantics, on the other hand, figurative language is part of the imagination, central to how we see the world. From this perspective, there is no distinction at all between literal and nonliteral language. Still another view of figurative language, somewhere between the Aristotelian and Romantic models, is the position taken by linguists George Lakoff and Mark Johnson (1980: 4), who argue that figurative language reflects much about our cognition and conceptual structure but that there is still a distinction, though not as great a one as Aristotle or Searle would propose, between literal and nonliteral language.

The role of figurative (nonliteral) language in creating and reflecting how we conceive of our world is complex and relevant to the larger question of the relationship between language and thought (something we take up in more detail in the following chapter). On the one hand, figurative language provides a tool to express a vast range of meaning beyond the primary meanings of words (if, in fact, we can designate certain meanings as primary, a proposal to which a Romantic might object). On the other hand, not all meaning can be expressed through language; some meaning is better expressed visually, through physical movement, drawing, and so on. (For example, try to describe the meaning of the word *spiral* or the way scissors



work without using your hands.) Below, we examine some of the ways in which we use figurative language and discuss how such language creates meaning.

## Connecting Meanings: Metaphor

**metaphor** nonliteral meaning of one word or phrase describes another word or phrase (*My car is a lemon.*)

Perhaps the most recognizable use of figurative language is **metaphor**. A metaphor, as Aristotle conceived it and as we still understand it, is a figure of speech that sets up an analogy between two words or phrases: *something is something else*. The word ultimately comes from the Greek *metaphero*, meaning ‘to carry over’ or ‘transfer.’

As mentioned, Lakoff and Johnson (1980) take the position that there is no real distinction between metaphors and literal speech because metaphorical meanings actually reflect our conceptual structures, how we view the world. Lakoff and Johnson also argue that these metaphorical conceptual structures influence how we behave. Metaphor for Lakoff and Johnson is not a rhetorical device but rather a way of perceiving the world that is woven throughout ordinary language. They provide examples of metaphors such as the following to support this claim:

hwæt!

The word *lemon*, used to refer to a malfunctioning vehicle, narrowed in meaning from the early 1900s slang meaning of *lemon*: something bad or undesirable or which fails to meet one’s expectations. It has now expanded again to mean any item that is unsatisfactory or defective.

*Time is money*

we spend it, waste it, save it, don’t have it, invest it, budget it,  
lose it

*Argument as war*

your claims are indefensible  
you attacked every weak point in my argument  
your criticisms were right on target  
I’ve never won an argument with you  
you shot down all my arguments

To what extent, if at all, do you think such metaphors shape our perspective and our behavior?

## Types of Metaphors

**dead metaphor** metaphor that is so common that it goes unnoticed as a metaphor (*I see your point.*)

**Dead metaphors** are those that are so conventionalized in everyday speech that we don’t even realize they are metaphors. Metaphors of sight provide some examples: *I see your point. I’ll take a look at your paper for you. He is blind to new ideas*. These uses of *see*, *look*, and *blind* have nothing to do with visual perception; we use *see* as a synonym for *understand*, *blind* to express intentional lack of understanding, and *take a look* to mean ‘investigate’. (Lakoff and Johnson argue that because these metaphors are so commonly used, they are not really dead at all but very productive.)

Another example of a truly dead metaphor is *broadcast*, which began as a metaphorical use of the casting of seeds broadly; today, it is not likely that anyone makes a connection with the spreading of seed.

We do have to *learn* that these are dead, however, as evidenced by some children's use and understanding of these words. A child who overhears the sentence *He can be so blind sometimes!* might ask, "Is he really blind?" And one child, knowing that *say* means 'to utter', said about a sign: "The sign wrote . . ." rather than "The sign said . . ." She had not yet learned the metaphorical meaning of *say*.

**mixed metaphor**  
metaphor that  
comprises parts of  
different metaphors:  
*hit the nail on the  
jackpot* combines *hit  
the nail on the head*  
and *hit the jackpot*

**Mixed metaphors** are those in which parts of different metaphors are telescoped into one utterance. This mixing can occur for a variety of reasons. The following examples were taken from the University of Illinois at Chicago website (<http://tiger.uic.edu/~rramakri/Readings/Fun/Mixed-Metaphors.htm>):

She grabbed the bull by the horns, and ran with it.  
I've hit the nail on the jackpot.  
I'm shooting from the seat of my pants.  
You're pulling my leg over my eyes.  
I'm flying by the edge of my seat.  
Beware my friend . . . you are skating on hot water.  
I would not trust him with a ten-foot pole.  
We're robbing Peter to pay the piper.  
I can see the carrot at the end of the tunnel.

We might come up with "hit the nail on the jackpot" because the two source metaphors ("hit the nail on the head" and "hit the jackpot") overlap in meaning ('to achieve a goal of some kind') and/or because they both include the verb *hit*. We might produce "flying by the edge of my seat" because both "flying by the seat of my pants" and "on the edge of my seat" have related meanings (unplanned action that may include fear and anxiety) and/or because both metaphors include the word *seat*.

**RPE 9.18**

**personification**  
attribution of  
human qualities to  
something that is  
not human

**Personification** **Personification**, another subtype of metaphorical language, gives human attributes to something that is not human. (For some, there is overlap between personification and *anthropomorphism*, but others argue that anthropomorphism is more specific, ascribing human qualities to gods, while others believe anthropomorphism to be more general that just language use; for example, ascribing human characteristics to nonhuman form in art.)

The steeples swam in the mist.  
The gates opened their arms.  
The project ate up all my time.  
The cold knocked me out.

The idea died a natural death.  
His theory explained . . .  
These facts suggest . . .

**RPE** 9.19

**synesthesia**  
metaphorical language in which one kind of sensation is described in terms of another; for example, a smell described as *sweet* or a color as *loud*

**Synesthesia** *Synesthesia* is a type of metaphorical language in which one kind of sensation is described in terms of another (color is attributed to sounds, odor to color, sound to odor, etc.). Examples include “sweet” smells (taste attributed to smell), “loud” colors (sound attributed to color), and so on. In the following lines from Charles Baudelaire’s poem “Correspondances,” “perfumes” (smells) are described in terms of touch, “fresh like the skin of infants.” The sense of touch is described in terms of sound (“sweet like oboes”). Finally, perfumes are described in terms of color (“green like prairies”).

There are perfumes fresh like the skin of infants  
Sweet like oboes, green like prairies . . .

**metonymy**  
description of something in terms of something with which it is closely associated: *The pen is mightier than the sword* (*pen* = the written word/diplomacy, *sword* = violence/force)

**Metonymy** Another type of figurative speech is **metonymy**; we refer to something by describing it in terms of something with which it is closely associated. A well-known example of metonymy is *The pen is mightier than the sword*, in which *pen* refers to writing or diplomacy and *sword* to action or war. Additional examples are the following:

*The Pentagon/The White House/Congress* issued a statement yesterday.  
*The law* is after her.

We often use metonymy to create verbs from nouns.

They *limousined* to the prom last night.  
We *Taco Belled* for lunch today.

**Synecdoche** is a specific type of metonymy in which we use a part of something to refer to the whole thing. A physician may refer to a patient as *the tonsillectomy* rather than *the patient in 4B* or *Mary Jones*. We may refer a car as *wheels* or a *ride*.

head (of cattle), threads (clothing), skirt (woman), suit (man)  
Sometimes synecdoche is more abstract:

Give me *a hand* = help  
Lend me *an ear* = your attention  
*Two heads* are better than one = cooperation

Synecdoche can also involve referring to something by manufacturer, product, material, or color.

I like my *Honda* = producer for product  
*Natural fibers* are all the rage these days = cotton clothes  
Do you take *plastic*? = credit cards

## Did You Know...?



## Hearing Colors

Synesthesia (related to the Greek word for 'sensation') is more than just a literary device; it is also a neurological phenomenon in which stimulation of one sensory or cognitive pathway leads to automatic, involuntary experiences in a second sensory or cognitive pathway. For example, one common form of synesthesia is grapheme → color synesthesia, in which letters or numbers are perceived as inherently colored. Writer Patricia Lynne Duffy reports, in her book *Blue Cats and Chartreuse Kittens*,

"One day," I said to my father, "I realized that to make an 'R' all I had to do was first write a 'P' and then draw a line down from its loop. And I was so surprised that I could turn a yellow letter into an orange letter just by adding a line."

Russian writer Vladimir Nabokov also had grapheme → color synesthesia, though it was likely actually phoneme → color since when he writes "letter" he means phoneme because it's aural.

Another form of synesthesia is music → color synesthesia, in which synesthetes experience colors when they hear certain tones, timbres, or keys.

*For more information*

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Nabokov, V. 1966. *Speak, memory: An autobiography revisited*. New York: Putnam.

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Some theorists suggest that all language is metonymic since words stand for things. (See Lakoff 1987, for example.)

## Comparing Meanings: Simile

**simile** comparison, usually of two unlike things, in order to create a nonliteral image (*run like a deer*)

**Similes** differ from metaphor and metonymy in that they involve a comparison of two unlike things and usually involve the words *like* or *as*.

He eats like a pig.

She's big as a house.

We're happy as clams.

My brain is like a sieve.

Here are some famous similes:

Suspicion climbed all over her face, like a kitten, but not so playfully. (Raymond Chandler)



Exuding good will like a mortician's convention in a plague year.  
(Daniel Berrigan)

As good as gold. (Charles Dickens)

Death hangs on her like an untimely frost. (William Shakespeare)

Solitude . . . is like Spanish moss which finally suffocates the tree it hangs on. (Anaïs Nin)

A woman without a man is like a fish without a bicycle. (attributed to Gloria Steinem)

## Idioms

**idiom** collocation of words or phrases with nonliteral meaning (*kick the bucket* = die)

Another type of figurative speech is **idiom**. Like other kinds of figurative language, idioms are collocations of words or phrases with nonliteral meanings.

a chip on one's shoulder, dodge the bullet, champing at the bit, foaming at the mouth, push the envelope, pull the wool over someone's eyes, tongue in cheek, pull one's leg

Idioms in other languages can be completely distinct from those in English, though some have English counterparts, sometimes with interesting twists.

### Idioms in Portuguese

Macacos me mordam! (monkeys bite me) 'to be intrigued or surprised'

botar um ponto final em (put the final dot in) 'bring the curtain down'

encurraldado (cornered) 'in a corner'

cair em si (to fall in oneself) 'to become aware'

andar na boa vai ela (to go in the good goes she) 'to be out on a spree'

### Idioms in French

faire d'une pierre deux coups (to hit twice with a stone) 'to kill two birds with one stone'

avoir le cafard 'to have the blues'

casser les couilles 'break one's balls/piss one off'

mort de rire 'to die laughing'

se taper la cloche (to tap/ring the bell) 'to eat very well'

### Idioms in German

Hans hat den Vogel abgeschossen. (Hans has shot off the bird.)  
'Hans stole the show.'

Er hat ins Gras gebissen. (He has bitten into the grass.) 'He died.'

## Accent on Linguistics and Computers



Courtesy of Apple

Does your spell-checker save or confuse you? Does your grammar-checker help or hinder your writing? Does your speech-recognition software make funny mistakes? Do you get frustrated or amazed by these computer programs? Well, have you ever wondered who invented and programmed them? Computational linguists have a major role here.

To program these computer features that we use every day required development of software that provides the computer with the grammatical rules of our language. Imagine the complexity! For example, how do you program a computer to recognize and understand ambiguity? Consider these two sentences:

They gave the monkeys the bananas because they were hungry.

They gave the monkeys the bananas because they were overripe.

They are syntactically identical, but they crucially differ in who or what *they* refers to. And this ambiguity is different from the one in the following “garden path” sentence:

The horse raced past the barn fell.

A garden path sentence is one that misleads us because we begin to decode (or parse) it one way but then have to backtrack to decipher its actual meaning. (We are led down the wrong

garden path, so to speak.) How do we get a machine to decode it to [*The horse (who was) raced past the barn*] fell? To complicate it more, there are sentences with the same syntactic structure that are not ambiguous:

The horse ridden past the barn bucked.

How does one create a software program that understands both the ambiguity of the garden path sentence and the lack of ambiguity of the second sentence, which has the same syntactic structure? This is the kind of challenge that draws many linguists into *computational linguistics*, the study of language and computers. This field is very broad and includes the following subfields:

- Natural language processing: Design software that (ideally) gives computers the capability to analyze, decode, and produce “natural” language.
- Machine translation: Design software that allows computers to translate from one language to another.
- Speech generation: Use computers to program telephones, cars, elevators, GPSs, and games to produce speech (and this involves getting intonation right!). Apple’s new Siri app (see photo) does all this and more!
- Speech recognition: Use computers to transform spoken language into written language.
- Corpus linguistics: Use computers to study large collections of spoken or written language (a collection is a *corpus*; plural *corpora*) statistically for frequency of patterns and so on.

(continued)

Computational linguistics extends beyond the borders of linguistics and computer science to include psychology (which provides models of how we think and solve problems), information theory (which provides models of communication), and mathematics and statistics (which provide tools for analyzing such models).

It is possible now to specialize in computational linguistics and then find rewarding employment with technology giants all over the world—AT&T Labs, General Electric, IBM, Lucent Technologies, Bell Labs, Microsoft, Xerox, SRI International in the United Kingdom, XRCE in France, DFKI in Germany, and IRST in Italy, to name just a few.

*For more information*

*Professional organizations*

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## Summary

We now know that to know what a word means is not a simple thing; our understanding of word meanings involves a complex semantic rule system. In this chapter, we've examined some of the parts of that system. We've seen that the meanings of some words can be expressed in terms of binary features and that word meanings fall into different categories, or semantic fields, that tell us something about how we view the world. Word meanings can also include the meanings of other words (entailment), and other meaning relationships among words can be described by the nyms, the complex relationships that we bring into play in our everyday language. We've explored how the meanings of the words we use (euphemisms and metaphors, among other examples) may reflect how we think and perceive things and how word meanings change and shift over time in various ways. And finally, we've discussed in some detail how much of what we say is

actually figurative in meaning, which provides us with yet another example of our unique ability to use language creatively.

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## Review, Practice, and Explore

### RPE 9.1 Deciphering Meaning: American English Vocabulary

We can derive meaning from the morphology and syntax of a word even if we've never seen it before. We can also derive meaning from context. Here are some words from different dialects of English, words you may or may not be familiar with (these are words taken from the *Dictionary of American Regional English*). Can you match each word with its meaning? Check your answers with the key at the end of this section. How did you come up with your answers? What clues did you use? Which words were the most difficult to match to meanings, and why? (To explore the DARE website, go to <http://polyglot.lss.wisc.edu/dare/dare.html>.)

pinkie	a. a tomato
princeton	b. a man's short hairstyle
poison apple	c. a nickname for an unimportant or out-of-the-way place
pirok	d. a water faucet placed on the outside of a building
sill cock	e. a main-dish pie, frequently containing fish and rice
Skunk's Misery	f. a trick, deception
prairie	g. a vacant lot or city block
sandy	h. a small sailing vessel with a sharp stern

### RPE 9.2 Onomatopoeia

Onomatopoeia can be used as a rhetorical device to create the illusion of sound in a text, as in the following example:

And ere three shrill notes the pipe he uttered, / You heard as if an army *muttered*; /  
The *muttering* grew to a *grumbling*; / And the *grumbling* grew to mighty *rumbling*; /  
And out of the house the rats came tumbling. (Browning 1888)

Find at least three examples of onomatopoeia in poetry or prose. You might find examples in unlikely places such as the newspaper and e-mails.

### RPE 9.3 Etymological Clues

Sometimes we use etymology (word origins) to help us decipher meanings. As you know, many English words have Latin and Greek roots. Below is a list of Greek and Roman gods' names. See if you can list words that have these names as roots. How does the meaning of the god's name help you decipher the meaning of the words on your list?

*Luna*—goddess of the moon. At one time, people believed that the moon had the power to drive some people out of their minds.

*Hypnos*—Greek god of sleep

*Somnus*—Roman god of sleep

*Nox*—goddess of darkness of night

*Lethe*—means ‘forgetfulness’; the river in Hades where the spirits of the dead drink and then forget their former lives and become listless ghosts

*Phobos*—son of Ares, the Greek god of war. His name means ‘fear’.

*Pan*—god of fields, forests, wild animals. Part man and part goat, he often caused serious trouble. The belief that he was nearby caused people to run in terror.

*Gaea*—goddess of the earth; Greek word for earth

*Terra*—Roman goddess of the earth

*Gratiae*—the Graces, three sisters who were goddesses of all that is charming in women

*Hygeia*—Greek goddess of health

*Psyche*—the maiden who fell in love with Eros, the Greek god of love. Her name means ‘soul’.

*Hydra*—a water serpent slain by Heracles

*Helios*—god of the sun

*Sol*—Roman god of the sun

*Morta*—Roman sister of Fate

#### RPE 9.4 Count or Noncount Nouns?

Many nouns can have both count and noncount interpretations. For example:

*noncount:* Love is patient.

*count:* She had two loves: philosophy and poetry.

*noncount:* Rice is good for you.

*count:* There are many rices to choose from: arborio, jasmine, basmati—to name a few.

Consider whether the following words are count or noncount, and give evidence (use them in sentences) to support your analysis.

truth, courage, music, fish, money

#### RPE 9.5 Semantic Features of Nouns

Write out the feature specifications of each of the following nouns. Remember that each noun is specified for three features: concrete/abstract, count/mass, and proper/common. Be prepared to justify your answers, as not all of you will agree on the features you assign to each noun.

kitten, homework, beer, the president of the United States, music, river, light, Santa Claus

**RPE 9.6** Children's Semantic Fields

Children do an amazing job of acquiring word meanings quickly and accurately. However, most children do make errors; most commonly, they overgeneralize the meaning of a word. Here are some typical examples:

Word	Child's Meaning
sweet	all things sweet (syrup, cookies, doughnuts, sugar, etc.)
apple	all fruits that are recognizable to child (round)
hot	light, bright objects (fire, lights, lamps, etc.)

Describe how these examples illustrate how the children are constructing semantic fields and how those are different from adult versions.

**RPE 9.7** Antonyms: Find the Opposites

Give antonyms for the following terms, and label each pair as gradable, relational, or complementary. Compare your answers. Did everyone come up with the same pairs? Discuss why or why not.

- |            |            |
|------------|------------|
| a. over    | e. chicken |
| b. hello   | f. near    |
| c. quickly | g. black   |
| d. now     | h. give    |

**RPE 9.8** Antonymy and Markedness

Antonyms come in different forms: gradable, relational, and complementary. Nevertheless, we tend to think of antonyms as opposites. Markedness is a related concept involving binary oppositions, highlighting how we tend to consider one member of a pair of antonyms typical and the other marked. Markedness is illustrated by the following pairs of antonyms, with the “typical” member of the pair on the left and the “marked” member on the right.

- How high/\*low is it? (height)
- How long/\*short is it? (length)
- How wide/\*narrow is it? (width)
- How heavy/\*light is it? (weight)
- How deep/\*shallow is it? (depth)

What are three or four other pairs of adjectives that illustrate this markedness relation?

**RPE 9.9** Synonyms

Write a short paragraph (four or five sentences) on a topic of your choice. Use at least four Anglo-Saxon terms from Table 9.2. Then rewrite the paragraph, replacing the Anglo-Saxon terms with their Latin or Greek synonyms. How does this substitution change your paragraph? Explain briefly.

**RPE 9.10** Ethnic Slurs

Research the origins of four or five ethnic slurs you are familiar with. Trace how those terms have evolved in meaning over time. Why do you think such terms are so powerful? Do you think that by changing terms (by using politically correct language or euphemisms) we can also

change attitudes and reduce discrimination? Will changing how we talk also change how we think about ourselves and about groups other than our own?

### RPE 9.11 Hyponymy

Here are four semantic categories:

CARS      STUDENTS      JOBS      DOGS

Come up with at least four hyponyms for each category. What criteria did you use to decide? Are your hyponyms distinguishable in terms of semantic features? Compare notes with your classmates. Why might your hyponyms for these categories differ from person to person?

### RPE 9.12 Polysemy

Explain how each of the following words is polysemous. The first example is done for you.

- a. finger (lift a finger, give someone the finger, finger something—steal or touch)
- b. lip
- c. heart                      f. butt
- d. face                      g. hand
- e. toe                        h. ear

Now, find as many examples of polysemy in the following poem as you can.

#### *Things*

What happened is, we grew lonely  
 living among the things,  
 so we gave the clock a face,  
 the chair a back,  
 the table four stout legs  
 which will never suffer fatigue.  
 We fitted our shoes with tongues  
 as smooth as our own  
 and hung tongues inside bells  
 so we could listen  
 to their emotional language,  
 and because we loved graceful profiles  
 the pitcher received a lip,  
 the bottle a long, slender neck.  
 Even what was beyond us  
 was recast in our image;  
 we gave the country a heart,  
 the storm an eye,  
 the cave a mouth  
 so we could pass into safety.

(Reprinted by permission of Louisiana State University Press  
 from *Alive Together*, by Lisel Mueller. Copyright ©1996 by Lisel Mueller.)



**RPE 9.13** Homonyms

Recall the following distinctions between homonyms, homophones, and homographs:

*homonyms*: sound same, same spelling

*homophones*: sound same, different spelling

*homographs*: same spelling, sound different

Supply a homonym, homophone, or homograph for each of the following words. Label your examples.

compact, bat, see, pupil, refuse, aisle, pail, bank, race, job, entrance, alter, braid

**RPE 9.14** Ambiguity

Label each of the following newspaper headlines as *lexically* ambiguous (ambiguous because of a word) or *syntactically* ambiguous (ambiguous because of the structure of the sentence). Briefly explain each of your answers. If the sentence is both lexically and syntactically ambiguous, label it as such and explain why.

- a. Grandmother of Eight Makes Hole in One
- b. Quarter of a Million Chinese Live on Water
- c. Police Begin Campaign to Run Down Jaywalkers
- d. Two Convicts Evade Noose, Jury Hung
- e. Safety Experts Say School Bus Passengers Should Be Belted
- f. Milk Drinkers Are Turning to Powder
- g. Iraqi Head Seeks Arms
- h. Two Sisters Reunite after Eighteen Years at Checkout Counter
- i. Doctor Testifies in Horse Suit
- j. Police Discover Crack in Australia

Also, choose two lexically ambiguous words that you find in these headlines. How do you know these words are ambiguous rather than simply vague?

**RPE 9.15** Meaning Change in Progress

The *American Heritage Dictionary* gives the following definitions for *aggravate*:

1. To make worse or more troublesome
2. To rouse to exasperation or anger; provoke

Many usage experts believe only the first definition should be used. Here's the dictionary's usage note: "*Aggravate* comes from the Latin verb *aggravare*, which meant 'to make heavier,' that is, 'to add to the weight of.' It also had the extended senses 'to annoy' and 'to oppress.' Some people claim that *aggravate* can only mean 'to make worse', and not 'to irritate', on the basis of the word's etymology. But in doing so, they ignore not only an English sense in use since the seventeenth century but also one of the original Latin ones. Sixty-eight percent of the *American Heritage* Usage Panel approves of its use in *It's the endless wait for luggage that aggravates me the most about air travel*. Look up the following words to see what the experts

have to say about them; then discuss your own usage and attitudes about the words and their meanings.

anxious  
hopefully  
orientate  
comprise  
literally

### RPE 9.16 Historical Shifts in Meaning

Below are a number of words from Old English (and a few that came into Old English from Old French) that still exist in Present-Day English, though each has shifted in meaning. Identify the type of meaning shift for each word. Choose from amelioration, pejoration, narrowing, broadening, and shift (in denotation—a completely new meaning).

PDE Word	Original Word	Meaning
dream	dréam	‘mirth’
moody	mōdig	‘brave’
deer	déor	‘beast/animal’
knight	cniht	‘boy, lad’
gum	góma	‘inside of mouth or throat’
bead	bedu	‘prayer’
dizzy	dysi <sup>3</sup>	‘foolish’
bird	bridd	‘young bird’
tide	tíd	‘time’
uncouth	uncúþ <sup>2</sup>	‘unknown’
witch	wicca	‘male or female sorcerer’
PDE Word	Old French	Meaning
butcher	bocher	‘one who slaughters goats’
accident	accident	‘an event’
carry	carier	‘transport by cart’

### RPE 9.17 Shifts in Meaning: Slang Words

The changes in meanings of English slang and taboo words are particularly interesting to study because these meanings have often changed rather dramatically over time. For example, the slang word *crapper* has its origin in one Thomas Crapper, who was in some way associated with the originator of the flush toilet (the “Silent Valveless Water Waste Preventer” patented in 1819, by Albert Giblin).

Choose four slang terms and look up their meanings. Explain how the meaning of each word has shifted over time. Illustrate with examples, and identify examples of broadening,

1. This symbol (ȝ), called *yogh*, was used in Middle English to represent /y/ and sometimes other velar phonemes.

2. This symbol, þ, called *thorn*, was used in Old and Middle English to represent either of the interdental fricatives, /θ/ and/or /ð/.

narrowing, pejoration, amelioration, and shift in denotation. (Slang dictionaries are excellent resources for this exercise.)

### RPE 9.18 Metaphors We Live By?

What are some of the metaphors we use in talking about the following concepts, and do they fall into a particular category? If so, do you think that category accurately represents our cultural perceptions of that concept? Explain briefly.

love      marriage      illness      life

### RPE 9.19 Human Qualities: Personification

Personification involves ascribing human attributes to inanimate or abstract concepts:

High gas prices are *killing us*, and they are the *enemy* of commuters.

The bad weather is truly *treacherous* and might *cheat* farmers out of some of the growing season.

In a text of your choice, find five examples of personification. Examples can come from a newspaper, poem, story, TV news report, magazine, radio program, or other medium. (*Hint*: sports commentary abounds with personification and metaphor.)

### RPE 9.20 Semantic Classes of Idioms

Idioms can be classified by the concepts they express. For example, there are many idiomatic expressions for anger, work, love, and sex.

*Anger*: flip your lid, blow your stack, bite someone's head off, let off steam

*Love*: fall for, be crazy about, dig, have a crush on, hit it off with, get hung up on, make eyes at someone

Come up with two classes of idioms on your own, and give three or four examples of idioms that fall into each class.

### RPE 9.21 The Semantics of Jokes

Many jokes are funny for semantic reasons, relying on ambiguous words, synonyms, antonymy, and various types of figurative language to create humor. We also use our knowledge of other grammatical components (syntax, morphology, phonology) to create humor. Explain the humor in each of the following jokes using your grammatical knowledge. What contributes to the humor in each joke? Be as specific and detailed as you can.

Q: What's the difference between Cheerios and Georgia Tech (insert team of your choice)?

A: Cheerios belong in a bowl.

Q: What lies at the bottom of the ocean and twitches?

A: A nervous wreck.

Q: Why do chicken coops have two doors?

A: Because if they had four doors, they would be chicken sedans.

Q: What does a skeleton get when he goes to a bar?

A: A beer and a mop.

Q: How many men does it take to wallpaper a room?

A: About two, if they're thinly sliced.

Q: How many ears did Davy Crockett have?

A: Three—his left ear, his right ear, and his wild front ear.

Q: Why don't cannibals eat clowns?

A: Because they taste funny.

*Answers to RPE 9.1*

pinkie (h), princeton (b), poison apple (a), pirok (e), sill cock (d), Skunk's Misery (c), prairie (g), sandy (f).





## Chapter at a Glance

**Sentence Semantics: The Linguistic Meaning of Sentences**

- Propositions and Truth Conditions
- When Meanings Overlap: Entailment and Paraphrase
- When Semantics and Syntax Overlap: The Structure of Meaning

**Pragmatics: How Context Shapes Meaning**

- Saying What You Mean and Meaning What You Say: Speech Acts
- Cooperative Talk: Conversational Rules
- The Power of Politeness
- When Semantics and Pragmatics Overlap

**Language and Thought**

- Linguistic Relativity and the Sapir-Whorf Hypothesis

**Summary****Sources and Resources****Review, Practice, and Explore**

# Semantics and Pragmatics: Making Meaning with Sentences

## Key Concepts

- Like words, sentences also have meaning, derived both from their structure and from the context in which they are uttered.
- Though we may think otherwise, our conversations actually follow rules. We are experts at manipulating these rules, maintaining them, violating them, and sometimes just ignoring them to express meaning.
- Cultural politeness conventions also shape how we talk to each other.
- Our language may (or may not) influence how we think.

## Did You Know . . . ?

The Cooperative Principle and Language Acquisition  
Does Culture Count?  
Lost in Translation

## Language Alive! Culture Clash and Pragmatic Failure

Register as a Literary Device

## Linguistics in the News Watson the Computer Plays "Jeopardy!"

## Accent on Forensic Linguistics

*Words differently arranged have a different meaning, and meanings differently arranged have a different effect.*

—BLAISE PASCAL (1623–1662)

### sentence meaning

meaning of a sentence regardless of context or knowledge of the world (its linguistic meaning)

hwæt!

Blaise Pascal was a French philosopher, mathematician, and physicist in the seventeenth century. He was a strong supporter of the scientific method and made important contributions in diverse areas, including geometry, mechanics, and probability theory.

### utterance meaning

meaning of utterances in context; their unspoken or indirect meaning

In the previous chapter, we discussed word meanings and meaning relationships such as hyponymy, metaphor, antonymy, and so on. Our discussion concerned semantics, the study of the complex set of rules by which we assign meanings to linguistic sounds or signs. One way of thinking about semantics is that it is the study of meanings encoded in words regardless of their context. In this chapter, we will discuss the meaning encoded in sentences, or **sentence meaning**. Like the word meanings we discussed in Chapter 9, sentence meaning is the meaning of a sentence on its own regardless of its context. Consider, for example, the sentence *Have you quit smoking?* This sentence encodes more than just a question; it has the additional meaning that you smoked at some point in the past. We extract this meaning from the sentence regardless of the context in which the sentence is uttered—the

meaning is encoded in the sentence itself. And what about this sentence: *Jones was killed, but he didn't die*. The oddity of this sentence, a contradiction, comes from the fact that it is both false and true at the same time. We understand this as a contradiction regardless of context, just from the meanings of the words.

The meanings encoded in words and sentences are not the only way we make meaning out of language, however. Sentences, like words, can also have nonliteral meanings. The sentence *I want to be a linguistics major* conveys exactly what it seems to—that you have a desire to be a linguistics major (sentence meaning). But not everything we say is so straightforward. What about when you say “How are you doing?” when you greet someone on the street? Are you really asking for information about someone’s well-being, or are you simply saying *hello* in a nonliteral way? (We know it’s usually the latter because if someone actually gives us a detailed description of how they are doing in response to this question, it’s usually far more than what we wanted to know.) We will discuss the unspoken or indirect meaning of sentences here, what we’ll call **utterance meaning**, and how these unspoken meanings differ from “direct,” or literal, meanings.

We will look at how we make conversational choices, such as to use *please* or *thank you*; to call someone by his or her first name, a nickname, or a formal title; to say *yes* in some contexts but *yeah* in others. We’ll also look at the rules of conversation that are shared by most speakers, rules that we

use to construct meaningful exchanges. We'll discuss how much information we convey and in what way, and how we know not only how to follow the rules of conversation but how to break them in order to express meaning. For example, when someone asks "What are you reading?" you might say, "My linguistics textbook," or you might say "A book!" Each response conveys a different meaning and has a different purpose.

**pragmatics** study of the meanings of sentences in context (utterance meaning)

The study of the meaning of language in context (utterance meaning) is called **pragmatics**. Pragmatics overlaps semantics (and utterance meaning overlaps sentence meaning) to provide us with a bigger picture of how we construct meaning out of language. We close the chapter with a discussion of the influence of language on how we think. Do the meanings we construct out of language reflect our view of the world? Does language reflect how we think? And if so, what does this mean about different languages and different cultures? How much does language influence our view of the world and vice versa?

## Sentence Semantics: The Linguistic Meaning of Sentences

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The first thing we have to do before pursuing sentence meaning in any detail is to briefly consider once again what we mean by *sentence*. And how does a sentence differ from an *utterance*? Do we need to make a distinction between the two?

Recall from Chapter 7 that a sentence is not the same thing as a clause; a sentence can contain many clauses, as in the following example:

I think that Louise told me that someone said that a train is coming.

A sentence can also be made up of a single clause:

A train is coming!

This sentence is not an utterance; you are reading it rather than saying it out loud or hearing someone say it to you. Its meaning, then, is based not on context but on the meaning encoded in the sentence itself. But if someone uttered or, even more specifically, *yelled* into your ear, "A train is coming!" your reaction might be very different from what it is here as you read the sentence on the page. You may take the meaning of this sentence to be a warning. So, in this case, the meaning of what we might call an utterance is determined in part by the context, by the speaker, and by the hearer.

So the distinction between sentence and utterance is rather fuzzy, and we will not attempt to pursue a precise definition here. But we will distinguish between *sentence meaning* and *utterance meaning*. We will define *sentence meaning* as the literal meaning of a sentence, regardless of context.



Utterance meaning is the meaning of a sentence in context, where the speaker's intention and hearer's interpretation contribute to meaning. In the next section, we look at sentence meaning in more detail, and we take up utterance meaning later in the chapter.

## Propositions and Truth Conditions

### proposition

assertion expressed by a sentence regardless of context or real-world facts

### truth condition

whether a proposition is logically true or false regardless of context or real-world facts

Think again about the sentence *A train is coming!* Regardless of context, this sentence has a meaning; it expresses a **proposition**, namely, that a train is coming. Whether a train is or is not really barreling down the track at this moment is irrelevant to how we assess sentence meaning; rather, propositions are meanings derived from sentences regardless of the facts of the world or the context in which the sentence is uttered. The principles of logic studied by philosophers and formal semanticists give us the framework for the study of the propositions expressed by a sentence. Key in this study is whether a proposition is logically true or false, its **truth condition**. Consider the following:

A train is coming.

A train is not coming.

In logical terms, we can say that the proposition expressed in the first sentence (namely, that a train is coming) is true, but that same proposition is false in the second: It is not the case that a train is coming. This general property of sentence meaning holds across languages: Sentences can express propositions—assertions that are either true or false.

Interestingly, truth conditions hold regardless of whether the proposition expressed is really possible. For example, we understand that the proposition expressed in *A unicorn is in my garden* is true (in the logical sense), and we know that this proposition is false in the sentence *A unicorn is not in my garden*. This understanding of propositions holds regardless of whether we believe in unicorns and regardless of whether we have gardens.

## When Sentences Don't Express Propositions

Not all sentences contain propositions. More specifically, not all sentences have truth conditions. Take, for example, the sentence *Is there a unicorn in my garden?* The proposition *There is a unicorn in my garden* does not follow from this sentence. Similarly, in the negative sentence *Isn't there a unicorn in my garden?* it does not follow that *There is not a unicorn in my garden*. This is because in interrogative sentences, propositions are questioned rather than asserted. A similar situation arises with commands, or imperative sentences. The sentence *Get out of here!* does not assert a proposition; the proposition *You will get out of here* does not follow.

## Analytic and Synthetic Sentences

Take a look at the following sentences. Are they true or false? Why?

George's uncle is a man.

She is her daughter's mother.

Sue met a bachelor who is unmarried.

Such sentences are *necessarily* true because their truth derives from linguistic meaning, not from any actual facts. For example, you don't have to know George's uncle to know that the proposition *George's uncle is a man* is true, and you don't have to know anything about Sue or the person she met to know that *Sue met a bachelor who is unmarried* is also true (and redundantly so). Such necessarily true sentences are called **analytic sentences**.

Now, think about sentences whose truth conditions depend on our knowledge of the world. The sentence *That dog is brown* expresses the proposition that there is a dog that is brown, but it is quite different from *That dog is a canine*. This second proposition is true because of its meaning relationships; as we saw in Chapter 9, the meaning of *dog* includes the meaning of *canine*. But the meaning of *dog* does not include the meaning *brown*, so the truth of *That dog is brown* depends not on the meaning relationships within the sentence itself but on meanings we gather from our knowledge of the world. Sentences that are true because they accord with the facts of the world are called **synthetic sentences**.

### analytic sentence

sentence that *must* be true regardless of real-world facts

### RPE 10.2

### synthetic sentence

sentence that is true because it accords with real-world facts

## When Meanings Overlap: Entailment and Paraphrase

Let's take a closer look at how sentences can include the meanings of other sentences. You may remember from Chapter 9 the meaning relationship called entailment. For example, the word *thoroughbred* entails the meaning of *horse*. This entailment relationship is called *hyponymy*. When we construct sentences with hyponyms, the sentence will also express those entailments. So, the meaning of the sentence *Seabiscuit is a thoroughbred* entails the meaning of the sentence *Seabiscuit is a horse*.

Thoroughbreds are horses.

Seabiscuit is a thoroughbred.

Seabiscuit is a horse.

Entailment can be logically expressed in the following way:

**Entailment:** A proposition X entails a proposition Y if the truth of Y follows necessarily from the truth of X.

### hwæt!

Seabiscuit was a champion racehorse in the 1940s—an unlikely champion who became a symbol of hope for many Americans during the Great Depression. He's been the subject of a 1949 film, a 2001 book, and a 2003 film, *Seabiscuit*, which was nominated for an Academy Award for Best Picture.

paraphrase  
(sentence  
synonymy)

sentence with the  
same entailments as  
another sentence

Recall that words are synonymous when they share the same basic meanings. Sentences can also be synonymous when they express the same entailments: when the truth of one sentence entails the truth of the other. Some examples of synonymous sentences, or **paraphrases**, are given below.

Seabiscuit beat War Admiral.  
War Admiral lost the race against Seabiscuit.  
Mary sold her house to Sue.  
Sue bought Mary's house.

In these examples, paraphrases are created by using different words and phrases that have the same entailments. Paraphrases can also be created by syntactic movement (such as by passive construction), as illustrated below. Both of these sentences entail that Seabiscuit beat War Admiral.

Seabiscuit beat War Admiral.  
War Admiral was beaten by Seabiscuit.

Subtle differences in word meaning can affect entailments. For example, the words *unmarried man* and *bachelor* entail each other (and are synonymous), and their meanings can be expressed by semantic features.

Mary met an unmarried man. [+male, +adult, -married]  
Mary met a bachelor. [+male, +adult, -married]

The following two sentences do not have the same entailments, which illustrates the difference between *kill* and *assassinate*, a distinction that is difficult to express in terms of semantic features.

Booth killed Lincoln.  
Booth assassinated Lincoln.

Both sentences entail that Lincoln died and that Booth was the agent of his death. The word *assassinate*, however, also entails that Booth's killing of Lincoln was politically motivated. It is difficult to see how semantic features could handle this. (Is there a feature [+politically motivated]?) These two terms overlap in meaning but aren't synonymous.

And finally, ambiguous sentences (discussed in Chapters 8 and 9) are those in which there is more than one set of entailments. Consider, for example:

She wrote a book on Fifth Avenue.  
He should lose those ugly polyester shirts.

The first sentence is syntactically ambiguous: one interpretation entails that she wrote a book while she was located on Fifth Avenue (she wrote a book, say, on dinosaurs); the other entails that she wrote a book *about* Fifth Avenue and says nothing about where she was when she did so. The second sentence is lexically ambiguous because of the verb *lose*, which can mean either 'misplace' or 'discard'. Each sentence has more than one meaning and, therefore, more than one set of entailments.

**contradiction**  
sentence that can't  
be true

## Sentences That Can't Be True: Contradictions

Sentences that logically can't be true are called **contradictions**. For example, *The man is canine* can't be true (in contrast to the analytic sentence *The man is human*, which is necessarily true). Consider the following sentences, each of which contains more than one clause. Are any of them contradictions?

- (1) Seabiscuit is a thoroughbred, and Seabiscuit is not a thoroughbred.
- (2) Either Seabiscuit is a thoroughbred or Seabiscuit is not a thoroughbred.
- (3) If Seabiscuit is a thoroughbred, Seabiscuit is a thoroughbred.
- (4) If every racehorse is here, no racehorse is not here.
- (5) If some racehorse is here, then no racehorse is here.

You probably figured out that (1) and (5) can't be true and are contradictions. You can probably also see that the truth conditions of these connected sentences depend in part on the logical relationships expressed by *and*, *either*, *or*, *if*, *every*, *some*, and *no*—members of the functional categories *conjunction* and *quantifier* (discussed in Chapters 5 and 7). In logic, *and*, *either*, *or*, and *if* are **logical connectives**, and they interact with quantifiers (such as *every*, *some*, and *no*) and negation (*not*) to affect sentence meaning in crucial ways. A full discussion of the interaction of these words would take us far into the realm of logic, so we won't pursue it here, but note that we have no trouble interpreting the meanings of these connected sentences, another piece of evidence for our (very complex) unconscious knowledge of language.

**logical connectives**  
words that express  
logical relationships,  
such as *either*, *or*,  
and *if*

### RPE 10.4

## Presupposition

We have seen so far that words and sentences can express entailment relations in a variety of ways. Entailments depend on the complex interplay of propositions, truth conditions, and logical connectives and do not, crucially, seem to depend on our knowledge of the world. Another type of entailment is **presupposition**, wherein we infer, or assume, certain propositions based on a particular sentence.

**presupposition**  
assumption that is  
implied by a word  
or sentence based  
on world knowledge

Have you stopped kissing Seabiscuit?

Presupposition: You used to kiss Seabiscuit.

I regret that Seabiscuit lost the race.

Presupposition: Seabiscuit lost the race.

I would love to go to another race.

Presupposition: I have been to at least one race already.

Presupposition on one level seems exactly like entailment: a logical conclusion follows from a particular proposition. There is some controversy, however, about whether presupposition, in contrast to entailment, relies on context rather than being strictly confined to sentence meaning. The argument is that a particular sentence will always express the same entailment(s)



but not always the same presuppositions. Linguist Stephen Levinson (1983: 187) provides the following sentences to illustrate:

She cried before she finished her thesis.

Entailment: She was working on her thesis.

Presupposition: She finished her thesis.

She died before she finished her thesis.

Entailment: She was working on her thesis.

Presupposition: She finished her thesis.

When we change the verb in the sentence from *cry* to *die*, the proposition *she finished her thesis* is no longer presupposed because of what we know about dead people and their ability to complete projects. If we assume that presuppositions do not depend on contextual knowledge, then this difference should not arise. Presupposition, then, is often considered a part of pragmatics, in which context rather than semantics plays a role.

## RPE 10.5

## When Semantics and Syntax Overlap: The Structure of Meaning

In this section, we'll investigate the overlap of sentence meaning (semantics) and sentence structure (syntax). This overlap is illustrated by the Chomsky's well-known sentence:

Colorless green ideas sleep furiously.

Remember that this sentence is syntactically well formed but semantically deviant. For this sentence to make sense, we have to change the words, coming up with a sentence such as the following:

Colorful red flags wave furiously.

or

Shoeless small children peer curiously.

You get the idea, and it's pretty straightforward. But a slightly different problem arises in sentences such as the following, and something else must be fixed to make them grammatical.

\*She slept the baby.

\*Jude met that Sam is smart.

\*The doctor seemed singing the blues.

These all sound very weird, but changing the words doesn't help: \**She slept the bed* is also ungrammatical, as is \**Jude met that the bus is on time*. These sentences are ungrammatical

## hwæt!

Some normally intransitive verbs can take complements, but they are nearly always lexically related to the verb, and they have a poetic quality: *sleep a deep sleep*, *dream a dream*, *die a slow death*.

because they violate syntactic rules, which is different from the violation we see in *Colorless green ideas sleep furiously*. We can fix them by changing the syntax:

She slept.

Jude met Sam.

The doctor seemed cheerful.

Here, we've eliminated the NP *the baby* from the first sentence and changed the clause *that Sam is smart* to an NP, *Sam*, in the second. In the third sentence, we've replaced the VP *singing the blues* with the AP *cheerful*. In the first example, we've eliminated the *complement* of the verb altogether, and in the other two we've replaced the complement of the verb with a complement of a different syntactic category: We've replaced a clause (CL) with NP, and VP with AP.

That changing the syntax makes these sentences meaningful tells us that syntax overlaps semantics. These data also suggest that part of our grammatical system includes rules that determine the syntactic configurations in which a particular verb can occur. *Sleep* is intransitive, for example, which means that it takes no complement at all. But *met*, on the other hand, is transitive and must take an NP (specifically, a direct object) as a complement. Semantic rules tell us what kinds of meanings go together: The subjects of the verbs *sleep* and *meet* must be things or entities that can sleep and meet something or someone (eliminating *colorless green ideas* as a candidate for the subject of *sleep*, for example). Syntactic rules require that the subjects of these verbs are of the category NP and also that the complement of *meet* is an NP as well (excluding the clause *that Sam is smart* in this position).

This overlap between syntax and semantics is one of linguistics' gray areas; it is not always easy to determine whether certain properties of language are best described as semantic, syntactic, or both. For example, does the fact that *meet* requires an NP complement rather than a clause complement follow from the fact that *meet* must be followed by a thing, namely, something that can be met? Is it semantics that determines the category of that complement, or is it the other way around? We will outline some of the central ideas that linguists have advanced to explain this complex relationship.

**arguments** set of phrases that occur with a verb and are assigned certain semantic roles by the verb

**thematic roles** semantic roles, including *agent*, *patient*, *source*, *goal*, etc., that the verb assigns to its arguments

## Thematic Roles and Argument Structure

To explain the evidence that verbs seem to “select” semantically appropriate phrases with which they occur, linguists have proposed that these phrases, or **arguments** of a verb, are assigned certain semantic roles, or **thematic roles**, by the verb. Table 10.1 lists some common thematic roles assigned to different phrases.

Table 10.1 Typical Thematic Roles

**Agent:** Initiator of the action (capable of volition)\*

*The puppy* chewed up the shoe.

*Marty* played chess.

**Patient:** Entity undergoing the effect of some action or change of state

*The ice* melted.

The sun melted *the ice*.

Marty cooked *the bacon*.

**Theme:** Entity moved by the action or whose location is described (with no change of state)

*The horse* is in the stable.

Juanita passed *the ball* to Jake.

Marty gave Leo *a book*.

**Experiencer:** Entity that is aware of the action or state described by the verb but is not in control of that action or state

*Marty* felt happy.

*The referee* observed the game.

*The deer* heard the hunter in the woods.

**Beneficiary:** Entity for whose benefit the action was performed

Marty gave *Leo* the book.

We baked a cake for *Lorian*.

**Instrument:** Means by which an action is performed or by which something comes about

She flipped the pancakes with *a spatula*.

Miss Scarlet killed Colonel Mustard with *a lead pipe*.

**Location:** Place in which something is situated or takes place

We ate *at Denny's*.

John sprinted *to the goal*.

**Goal:** Entity toward which something moves, either literally or metaphorically

Marty gave the book *to Leo*.

She gave a speech *to the club*.

**Source:** Entity from which something moves, either literally or metaphorically

The water bubbled *from the spring*.

They came all the way *from New Orleans*.

\*Definitions from Saeed, J. 2003. *Semantics*, 2nd edn. Oxford: Blackwell. 149–150.

The verb *sleep*, for example, assigns the thematic role *patient* to one argument, but the verb *meet* two arguments and assigns the role *agent* to one and *theme* to the other.

*sleep*: patient

*meet*: agent, theme

As stated here, the relationship between the verb and its arguments is purely semantic; what's lacking, however, is the information about where each argument occurs in the sentence and the category of the argument itself as NP, PP, and so on. Nothing in the above information about *sleep* and *meet* tells us, for example, that *meet* assigns the agent's thematic role to an NP in the subject position and the theme's thematic role to an NP in the object position. This syntactic information must be included somewhere in our grammatical knowledge, in what we will refer to as **argument structure**. Our knowledge of syntax and semantics includes not only the thematic roles that a verb assigns but also principles and rules that determine the syntactic categories and positions of those arguments.

This concludes our discussion of sentence meaning. In the following section, we turn to meaning in context, or pragmatics. Just as semantics and syntax overlap, we'll see that there is some overlap between semantics and pragmatics and that both contribute to how we understand and use language.

**argument structure**  
set or arguments  
of a verb and their  
syntactic categories

RPE 10.6

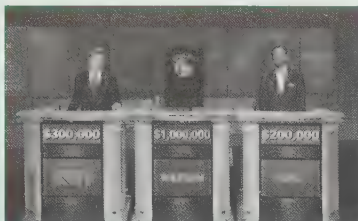
## Pragmatics: How Context Shapes Meaning

If you were to hear an urgent, adult voice utter “A train is coming!” while you were standing on a railroad track not paying much attention to the proximity of trains, you would, under typical circumstances, quickly move off the track to safety. The meaning of this utterance is bound up with the context in which you hear it—where you are, what you are doing, who says it, what kind of experiences you’ve had, your cultural expectations, and so on. It’s a warning. Now consider a different scenario. You are on the train track again. A child comes up with her mother and, laughing, says, “A train is coming!” You don’t flinch; you smile benignly and remain where you are. In this case, the meaning of the utterance is quite different. You know from the situation that there is no danger (the parent, for example, doesn’t seem concerned about you getting off the track), and the speaker is a laughing child whose intention is not to warn but to amuse. So, the social context within which a sentence is uttered can affect its meaning (here, what is a warning under certain circumstances becomes a joke under others), as can the speaker’s intention and the hearer’s interpretation. How speaker intention and hearer interpretation affect meaning is the subject of pragmatics, the study of *utterance meaning*, or how the meanings of the things we say



LINGUISTICS  
IN THE NEWS

## Watson the Computer Plays “Jeopardy!”



© Jeopardy!/Landov

“What is Toronto?????” In a bout with human “Jeopardy!” champions Ken Jennings and Brad Rutter, Watson the IBM computer was first to buzz in. The answer was “Its largest airport is named for a WWII hero, its second largest for a WWII battle” in the category “U.S. Cities.” The correct response was Chicago. Does this mistake mean that Watson isn’t as smart as he’s supposed to be? It seemed like a pretty major mistake, but Watson was smart enough to wager only \$947 and win the game.

IBM’s Watson is a “question-answering” machine, designed to understand questions put to it in natural language and respond (through a voice synthesizer) with a factual answer. So Watson, unlike a search engine, doesn’t simply point a user to a document that contains the answer. Rather, Watson produces an answer itself, as a human would in conversation. Watson’s abilities are particularly put to the test on a game show such as “Jeopardy!”, where clues to questions require complex decoding of language (such as witty puns and other wordplay based on cultural experience)

rather than on logic. It was logic that led another IBM computer, Deep Blue, to beat chess champion Gary Kasparov at chess in 1997. Watson, it seems, brings us one step closer to being able to program computers to understand language in the way that humans do.

Watson was developed by David Ferrucci, senior manager of IBM’s Semantic Analysis and Integration department. IBM gave Ferrucci three to five years and a team of fifteen people to develop a question-answering system that could win at “Jeopardy!” Ferrucci and his colleagues fed millions of documents into Watson’s memory (including dictionaries, thesauruses, bibles, and encyclopedias) and programmed it with hundreds of algorithms so that Watson can “think” in hundreds of directions at a time. Algorithms rank the plausibility of answers, providing Watson not with a “right” answer but with many possibilities, ranked in order of plausibility. So Watson is basically programmed to find the answer that is “more right” than the others and to be able to cross-check answers. (For example, when Watson analyzed the clue “In 1594 he took a job as a tax collector in Andalusia,” two most likely answers emerged: “Thoreau” and “Cervantes.” Cross-checking “Thoreau” revealed his birth date was 1817, ruling out that answer.)

IBM hopes to market computers like Watson to companies to help decision makers sort through huge amounts of data quickly and efficiently and, based on this information, to get answers quickly. Some argue, however, that Watson’s “intelligence” is based only on knowable facts gleaned from written English texts. Human knowledge involves mathematical reasoning and judgment, and understanding language involves not simply semantics but also pragmatics: decoding meaning based on context. Nevertheless, Watson’s abilities may tell us something about how our brains process language and how we make educated guesses about meanings of words and sentences.

#### For more information

O’Connor, A. Watson dominates ‘Jeopardy’ but stumbles over geography. *New York Times*. 15 February 2011. <http://artsbeat.blogs.nytimes.com/2011/02/15/watson-dominates-jeopardy-but-stumbles-over-geography/>

Watch Watson play “Jeopardy!” at <http://www.collegedumor.com/video/6195785/watson-the-computer-that-could-play-jeopardy>

IBM’s Deep QA Project: <http://www.research.ibm.com/deepqa/deepqa.shtml>

are shaped by context. In the following sections, we discuss some of the major topics of study within pragmatics: speech acts, conversational rules, and politeness. We conclude this section with a discussion of *definiteness* and *deixis*, which illustrate how pragmatics and semantics overlap.

## Saying What You Mean and Meaning What You Say: Speech Acts

Before we delve more deeply into utterance meaning, let's return briefly to syntax. We use certain kinds of syntactic structures, called *sentence types*, when speaking: interrogatives (questions), imperatives (commands), and declaratives (statements).

Is it raining? (interrogative)

Get out! (command)

I'd like a sandwich. (statement)

In pragmatic terms (recall the train example), each utterance we make carries communicative force and can be thought of as performing a particular act, what we call a **speech act**. If you were to say "Is it raining?", you would have performed a speech act. When sentence type corresponds with our intention, it is a **direct speech act**. The speech act *Is it raining?* is a direct speech act if uttered with the intention of asking a question about the truth or falsity of the current level of precipitation. Direct speech acts are the sum of the meanings of their parts. You typically ask a question when you don't know something, and you ask someone so you can have an answer; for example, "Can you juggle?" The appropriate answer would be either *yes* or *no*. In a direct speech act, the intention and effect are predictable; a question is a request for information to which a particular reply is appropriate.

Now, what about this sentence:

Have you cleaned your room yet?

This sentence is also an interrogative in terms of sentence type, but does it have to be a question? Not necessarily. What if you have asked your daughter repeatedly to clean her room and told her that if she doesn't, she won't be allowed to go the movies as planned? Uttering this interrogative sentence type actually conveys a (mild) threat: If you don't clean your room, then no movies for you! This sentence (which we'll also assume is an utterance) is an **indirect speech act**: Its meaning depends on context rather than on sentence type.

This is just a simple illustration of the complexity of speech acts and of how sentence type does not always correspond to speaker intention (nor, for that matter, to hearer interpretation). **Speech act theory** tries to explain more precisely how meaning and action are related to language. Speech act

### speech act

utterance intended to convey communicative force

### direct speech act

utterance whose meaning is the sum of its parts, the literal meaning

### indirect speech act

utterance whose meaning depends on context rather than on literal meaning

### speech act theory

theory dealing with the construction of meaning in conversation by direct and indirect speech acts

theory (originally introduced by Austin in 1962) is concerned with the communicative intentions of speakers and how they achieve their communicative goals. John Austin proposes that communication is a series of communicative acts that are used systematically to accomplish particular purposes and that all utterances perform actions by having a specific force assigned to them. Austin offers three basic kinds of acts that are simultaneously performed by an utterance. They can be informally described as follows:

*locutionary act*: an utterance with a particular sense and reference  
(closest to meaning in the traditional sense, the sum of its parts)

*illocutionary act*: the act (defined by social convention) that is performed by making the utterance: a statement, offer, promise, bet, etc.

*perlocutionary act*: the (not necessarily intentional) effects on the audience, whether intended or unintended, brought about by the utterance

Examples are useful here. Say that a teacher says, “Jo, would you like to read your poem first?” The locutionary speech act is the literal meaning of the question, namely, whether Jo is interested in reading her poem. The illocutionary speech act is, by social convention, a request that Jo read her poem. The perlocutionary act is its effect on Jo, who might agree or refuse to read her poem.

The philosopher John Searle proposed that the basic unit of human communication is the illocutionary act, more specifically, the indirect speech act, which he says is “[when] the speaker communicates to the hearer more than he actually says by way of relying on their mutually shared background information, both linguistic and nonlinguistic, together with the general powers of rationality and inference on the part of the hearer” (1975: 61).

What are some ways that the following question, statement, and command sentence types can be interpreted? In what contexts can these sentences be indirect speech acts?

Can you pass the salt?  
Open the door!  
Do you know where the museum is?  
Tell me why you’re never on time!  
Is there a bathroom near here?  
I’d like one ticket, please.  
You left the light on.

Many other factors contribute to how we understand speech acts. Who are the participants in the conversation, and what is their relationship

to one another? Under what conditions is a particular utterance made? If you make a promise, for example, it's only a promise if you can follow through on it or think you can and intend to do so. If you know you can't, it isn't a promise. What do such social factors as age, ethnicity, gender, and religious and political beliefs contribute to utterance meaning? We often violate social conventions, causing miscommunication or worse; sometimes we say things that are insulting, insensitive, or even hateful based on our world knowledge (or lack thereof). Think about humor, too; an utterance might be funny in one context and downright insulting in another, again illustrating that meaning is shaped by context in crucial and often powerful ways.

RPE 10.7

RPE 10.8

Grice's maxims of conversation rules of conversation that describe the shared rules speakers use in interactions; they include *quantity*, *quality*, *relevance*, and *manner*

## Cooperative Talk: Conversational Rules

So far, we've talked about the importance of context, speaker intention, and listener interpretation in determining the meanings of utterances. As speakers, we also share certain implicit conversational rules for how to communicate spoken and unspoken messages. These conversational rules are crucial for successful communication, and we are well aware of how to follow them, or in some cases how to ignore them, in order to convey a particular message. We'll also see that these rules of conversation can vary across languages and cultures, and the lack of shared knowledge regarding these rules can lead to communication breakdown.

The philosopher Paul Grice (1975, 1989) proposed the following **maxims of conversation**, which continue to be an accurate description of the shared rules that speakers use in interactions.

### Maxim of Quantity

- Make your contribution to the conversation as informative as necessary.
- Do not make your contribution to the conversation more informative than necessary.

### Maxim of Quality

- Do not say what you believe to be false.
- Do not say that for which you lack adequate evidence.

### Maxim of Relevance

- Say only things that are relevant.

### Maxim of Manner

- Avoid obscurity of expression.
- Avoid ambiguity.
- Be brief (avoid unnecessary wordiness).
- Be orderly. (1989: 27)



## Did You Know...?



## The Cooperative Principle and Language Acquisition

Part of acquiring a language is acquiring the pragmatics of the language, not just in order to participate in conversations but, as Brian MacWhinney (2003) proposes, to learn the meanings of words. Suppose a child is presented with three items—a glass, a teacup, and a demitasse—and is asked to pick out each item (“Which is the teacup?” “Which is the glass?”). The child will match the known terms to the known items. The child will also correctly infer that the remaining term, *demitasse*, is the name of the leftover item. MacWhinney proposes that this is not simply because of the process of elimination but because the child is actually relying on the cooperative principle, assuming that the questioner is reasonable and using a new name for a new object. Learning new words and their meanings, according to MacWhinney, involves not only semantics but pragmatics and mutual cooperation.

**Grice’s cooperative principle**

assumption that in conversation speakers will make a sincere effort to collaboratively exchange information

**speaker meaning**

meaning beyond the words alone, which the speaker assumes the hearer can interpret based on communicative context

The conversational maxims go hand in hand with Grice’s **cooperative principle**, another principle of conversation, which assumes that the participants in a conversation will make a “conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange” (Grice 1989: 26). At its core, the cooperative principle means that in conversation, we don’t lie, nor do we assume our conversational partners lie—we are sincere, and for the most part, we contribute relevant information. Grice recognized the difference between sentence meaning and speaker intention (similar to direct and indirect speech acts). He proposed that speakers assume that the hearer can interpret additional meaning based on the context or communicative situation and does not rely on the meanings of the words alone. Grice refers to this kind of meaning as **speaker meaning**.

## Manipulating Maxims

Grice also discusses the fact that speakers can violate maxims, often because of *maxim clash*, wherein if one maxim is to be maintained, another must be violated. Even when we violate maxims, meaning is typically conveyed by *implicature* in such cases, and the cooperative principle is maintained. Speakers can also ignore the maxims or flout them, in some cases, as when they are attempting to deceive or are being intentionally obtuse. Flouting a maxim can also involve an implication that creates meaning. Under normal circumstances, however, speakers expect other conversation partners to follow the maxims.

Here are examples of utterances in which the maxims are followed, violated, and then flouted.

- (1) Speaker A: Have you been to a baseball game lately?  
Speaker B: No, but I'm going to go to a game this weekend.

Here, the maxims are followed: Speaker A has asked for information, and Speaker B has supplied it in the relevant manner and amount. Now, consider this next exchange:

- (2) Speaker A: When is your next class?  
Speaker B: Sometime this afternoon.

Here, Speaker B is violating the maxim of quantity, not providing enough information. But if we assume Speaker B is not doing this deliberately and really doesn't know when the class is, Speaker B is not violating the cooperative principle. Speaker B doesn't want to lie or guess, which would violate the maxim of quality, so has to stick with this uninformative but truthful statement. The interplay of the two maxims (quality and quantity) causes a maxim clash.

Now, look at this third exchange:

- (3) Speaker A: So, do you think Maria will make it to the wedding?  
Speaker B: Well, she told me she was taking off work that day.

Here, Speaker B's statement is obscure and doesn't provide the information requested by Speaker A. The maxim of manner is flouted—Speaker B deliberately chooses not to observe it. But Speaker B clearly *implies* an answer to Speaker A's question and so is not being deliberately obscure. Speaker B is therefore following the cooperative principle in this case as well.

And finally, consider this (odd) exchange:

- (4) Speaker A: So, do you think Maria is having a baby?  
Speaker B: I have a train to catch.

Here, Speaker B is flouting several maxims by responding to Speaker A's question with a statement that seems completely irrelevant (violating the maxim of relevance), obscure (violating the maxim of quality), and uninformative (violating the maxim of quantity). But, because the cooperative principle is so strong, a possible interpretation of Speaker B's statement here is that Speaker B is refusing to participate in gossip about Maria. By flouting maxims, Speaker B is actually making an interpretable and meaningful conversational move.

## The Power of Politeness

The most common reason for an indirect rather than direct speech act is politeness. Politeness takes many linguistic forms and is somewhat

A Buddhist monk  
and a European girl  
greet each other  
with Namaste.



Ernst Haas/Getty Images

difficult to define. Politeness expresses concern for others but also carries the intention of having this concern reciprocated; we're polite because we want to make others feel at ease, and this in turn makes us more comfortable, too. Politeness also crosses social boundaries; adults and small children can be polite to each other, and the president of the United States would be expected to be polite to a citizen he or she meets on the street, even though their social status is dramatically different. So, politeness is not restricted by social distance, and how we perform polite speech acts depends on our gauging and evaluating this social distance (or lack of it). To be considered polite, a speech act must fit the social expectations of politeness in the particular context—expectations that are culturally defined.

**positive politeness**  
politeness  
strategy based  
on the speaker's  
constructing  
solidarity with the  
addressee

**negative politeness**  
politeness strategy  
based on the  
speaker's minimizing  
imposition on the  
addressee

We can break politeness down into **positive politeness** and **negative politeness** (Brown & Levinson 1987). In positive politeness, the speaker and the addressee have the same needs, and the speaker indicates that to the addressee (expressing solidarity with the addressee). In negative politeness, the speaker appreciates the addressee's needs but may not share them (expressing the need to be free from imposing on the addressee). Table 10.2 lists the features of positive and negative politeness.

Is Speaker B's utterance a positive politeness strategy or a negative one?

- (5) Speaker A: I'm so disappointed that I missed the game!  
Speaker B: I bet you are! They should have told you they'd rescheduled it!

Speaker B is using positive politeness, expressing solidarity with Speaker A, sympathizing with Speaker A, and assuming common ground by asserting that missing the game is an unfortunate occurrence and agreeing that Speaker A should have been informed of its being rescheduled.

**Table 10.2** Features of Positive and Negative Politeness**Positive Politeness**

Speaker	claims common ground with the hearer
	conveys a sense of cooperation with hearer
	tries to meet or appreciate hearer's needs and desires
	may offer sympathy, a compliment, optimism, promise, offer, and so on

**Negative Politeness**

Speaker	makes no assumptions about hearer's needs, desires, or abilities to cooperate
	doesn't assume or attempt to coerce, is direct, and tries not to impose his or her needs on hearer
	is often pessimistic, deferential, and impersonal

Now, consider the next exchange. Is Speaker A using positive politeness or negative politeness?

- (6) Speaker A: I know you have a lot of students asking you this, but I was hoping you'd let me register for your class; I'd love to take it!
- Speaker B: Well, I'll be happy to if space becomes available, and I'm sorry if it doesn't work out.

This exchange illustrates negative politeness; Speaker A is asking a question of B, trying to minimize the possible imposition on B, and is being very deferential and apologetic. Speaker B responds with a polite, but possibly negative, message: that space may not become available in the class, and Speaker A's needs may not be met.

**RPE 10.10****RPE 10.11****Honorifics and Forms of Address**

Some languages encode pragmatic distinctions about formality, politeness, and social status more directly in their grammatical system than does English. **Honorifics** are grammatical forms, usually words or affixes, that express the relative social status of the speaker to the addressee. For example, German, Spanish, and French have distinct pronouns for *you* that reflect status and formality.

**honorifics**  
grammatical forms, usually words or affixes, that express the relative social status of the speaker to the addressee

German	du	informal you (singular)
	ihr	informal you (plural)
	Sie	formal/polite you (singular or plural)



# Language Alive!

## Culture Clash and Pragmatic Failure

When the pragmatic differences across cultures collide, communication can break down because speaker intentions are badly misunderstood. The result is *pragmatic failure* (Thomas 1983).

As English becomes the second language of younger generations of Hmong speakers, certain pragmatic practices are lost, causing miscommunication among the younger speakers and their elders. Expectations of what is considered polite, for example, begin to diverge, causing pragmatic failure and social distance. Take the following example, from Lillian Faderman's *I Begin My Life All Over* (1998), a collection of narratives by Hmong immigrants from Laos. Here, Loco Vang, a young gang member, tells the story of how resentment grew between him and his father.

When I go home, I know my mother cares about me a little. But I don't really talk to her. I just say "Hi, hello." Every time I used to help out my dad, he never showed respect to me for it. If he needed me to help him carry, I'd help him. But he never said "Thank you," or "You're welcome." So I got mad. Whenever he tells me what to do now, I don't even bother to do it. (p. 193)

You may recognize Loco Vang's expectations about politeness as similar to your own; in North American culture, speakers explicitly thank each other in a variety of situations, which is not the case among the Hmong. Loco Vang's adoption of American politeness strategies and his father's lack of familiarity with those strategies has led to pragmatic failure and miscommunication. Burt and Yang's (2005) study of pragmatic failure emphasizes the need not only for English language instruction in immigrant communities but also for instruction in cross-cultural pragmatics to minimize the potential for pragmatic failure.

*For more information*

Burt, S. & H. Yang. 2005. Growing up shifting: Immigrant children, their families, and the schools. In K. Denham & A. Lobeck (eds.), *Language in the schools: Integrating linguistic knowledge into K-12 education*. Mahwah, NJ: Lawrence Erlbaum.

Faderman, L. with G. Xiong. 1998. *I begin my life all over: The Hmong and the American immigrant experience*. Boston: Beacon Press.

Thomas, J. 1983. Cross-cultural pragmatic failure. *Applied Linguistics* 4(2). 91–112.

Spanish	tú	informal you (singular)
	usted	formal/polite you (singular)
	ustedes	formal/polite you (plural)
French	tu	informal you (singular)
	vous	formal/polite you (singular or plural)

Honorifics are used in many languages, including Korean, Javanese, Tibetan, Samoan, and Sudanese. An example from Japanese (Harada 1976: 514) is the series of affixes that can attach to names:

-sama	used to address people of high rank
-san	title of respect, quite common
-chan	a diminutive, informal version of -san, used with children and pets. Used more by women and girls and also to refer to women and girls.
-kun	informal honorific, used primarily for males
-sensei	used to address someone of authority, usually someone who has a particular skill or capability: teachers, doctors, politicians, etc.

## hwaet!

You may recognize the word *sensei* and the phrase “bow to your sensei” from *The Karate Kid* and other movies; it’s used to address teachers and other professionals.

Also, many Japanese words take a different form depending on their relative honorific status, and words are grouped into *sonkei-go* (respectful words), *teinei-go* (polite words), and *kenzyoo-go* (humble words). Japanese also employs three levels of politeness: plain, used among friends; polite, used among strangers or to show respect to superiors; and formal, used in formal situations such as speeches. The forms differ

not only in vocabulary but also in the addition of certain affixes. Also, there are two respectful forms for each level of politeness, indicated by distinct verb endings. *Sonkei-go*, the respectful language, shows respect to the subject of the sentence, while *kenzyoo-go*, the humble language, shows respect to the direct or indirect object, primarily by humbling the speaker.

plain:	Jon san ga Sato san wo <i>matsu</i> ‘John is waiting for Sato.’
respect for subject:	Sensei ga o-machi-ni-naru. ‘The teacher is waiting.’
respect for object:	Sensei wo omachi-suru. ‘We are waiting for you, Teacher.’

Javanese is another language that demonstrates respect (based on age, gender, kinship relationships, wealth, etc.) by employing different levels of language. For example, a single expression, *Are you going to eat rice and cassava now?* results in five distinct utterances, depending on the status of the person being addressed, as illustrated by these examples from Geertz (1968: 282–295):

high status:	Menapa pandjenengan bade ðahar sekul kalijan kaspé samenika? ‘Are you going to eat rice and cassava now?’
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high with honorific:	Menapa sampéjan bade neḍa sekul kalijan kaspé samenika? 'Are you going to eat rice and cassava now?'
middle status:	Napa sampéjan adjeng neḍa sekul lan kaspé saniki? 'Are you going to eat rice and cassava now?'
low status:	Apa sampéjan arep neḍa sega lan kaspé saiki? 'Are you going to eat rice and cassava now?'
low with honorific:	Apa kowé arep mangan sega lan kaspé saiki? 'Are you going to eat rice and cassava now?'

Though all languages have ways of conveying respect and politeness, some languages have encoded this feature into the grammatical system with honorifics.

Though systems like the Japanese or Javanese may seem complex to English speakers, we all make similar choices about vocabulary and style all the time, based on social status, comfort level, and degree of formality. In English, we vary our language by varying terms of address, such as *Mr.* or *Ms.*; by using tags of camaraderie or endearment, such as *dear*, *sweetie*, or *hon*; by making decisions about word choice, such as *however* versus *but*, *perhaps* versus *maybe*; and even by altering the pitch of our voices. We use euphemisms (discussed in Chapter 9) to avoid taboo words and topics that may cause discomfort; for instance, we may use *rest room* rather than *john* in a particular context, or *sleep together* rather than *have sex*.

#### RPE 10.12

### Register

Even though we think of politeness as “being nice to people”—opening doors for people, offering to help, letting someone go first—politeness has everything to do with power and solidarity. We are polite because we want to create or maintain solidarity, and no matter who we talk to, we are constantly aware of social distance (which we may want to widen or narrow depending on our intentions). Because it is so important in negotiating and maintaining social relationships, we are often insecure about our language. We may use formal language for this purpose in certain contexts but informal language in others—we all are adept at switching **registers**, or speech styles, unconsciously and often to assert our power and status in certain contexts and to minimize it in others. A doctor talking to a patient with a serious illness will use a different register from the one used to discuss the patient with another physician; you most likely talk to your friends during lunch in a register different from the one you use when talking to your teacher or to a small child.

**register** speech or writing style adopted for a particular audience

# Language Alive!

## Register as a Literary Device

The images of a novel's characters that we conjure up in our mind's eye are often created by how they talk. Dialogue can reflect differences in register (*sez* rather than *says*, *dunno* rather than *don't know*) and tells us not only about a character but also about social perceptions of language—what is considered lofty and what is considered low. Register in literature also offers us a window into how language, and the social perceptions about it, changes over time. The writing of Geoffrey Chaucer, the great fifteenth-century author of *The Canterbury Tales* and other works, provides not only a rich repository of both the most vulgar and the most sophisticated terms of the time but also of the perceptions about language and how they were linked to class. In addition to *ferre*, *erse*, *pisse*, *shiten*, *queynte*, and *swive* (meaning 'to copulate'), in Chaucer's work we also find such archaic terms as *maat* (Arabic for 'dead' or 'defeated') and *dulcarnoun* 'a puzzle', as well as a range of highly technical terms (such as *solsticium*). The lowbrow but cunning Miller in *The Canterbury Tales* is described almost entirely in Anglo-Saxon vocabulary (Anglo-Saxon and Norse vocabulary in italics):

*The Millere was a stout carl for the nones;  
Ful byg he was of brawn, and eek of bones.  
That proved well, for over al there he cam  
At wrastlyng he wolde have alwey the ram  
He was short-sholdred, brood, a thikke knarre.* (lines 545–550)

But the Prioress, who fancies herself sharp and sophisticated, is described in terms borrowed from French, which at this point was a language of diminishing social prestige. Her association with French thus makes her character pretentious and absurd (French vocabulary in italics):

*And likely she was of greet desport,  
And ful pleasant and amiable of port,  
And peyned hire to countrefete cheere  
Of court, and to been estatliche of manere,  
And to ben holden digne of reverence.  
But, for so speken of hire conscience,  
She was so charitable and so pitous  
She would wepe, if that she saugh a mous  
Kaught in trappe, if it were deed or bledde.* (lines 137–145)

Examples from Hughes (2000: 125–130).

Register differences show up in various ways. One is word choice; we may use a euphemism (*restroom* versus *john*) depending on audience, and we might use contractions (*gonna*, *wanna*) around our friends but not in a high-intensity job interview. We write in different registers, too; think about the register you use in e-mail compared to the one you use in a research paper.



## When Semantics and Pragmatics Overlap

Suppose your teacher walked into class and said “She won the race!” You wouldn’t have any idea who *she* was, but you would know that whoever she was, she was female, and there was only one of her. So the semantics of *she* would tell you something, but the word alone would not provide enough information for you to interpret this sentence. You’d also need information about who or what *she* refers to. This information could be supplied by a previous conversation (about, say, your teacher’s sister, who is running in the Boston Marathon) or by another utterance by your teacher (“My sister won the Boston Marathon!”) or even by someone directing you to a newspaper with a picture of a woman winning a race. In other words, the interpretation of pronouns relies on more than just semantics; pragmatics, or context, also plays a role. In this section, we look at how semantics and pragmatics overlap in constructing meaning.

### Definiteness

As we saw in Chapter 7, the determiners *the* and *a* express grammatical information of number; *the* is either singular or plural (*the dog/dogs*), and *a* (*a dog/\*dogs*) is singular. The interpretation of these words also relies on context. To illustrate, consider the following:

*The woman* sent me a letter.

*A woman* sent me a letter.

What is the difference in interpretation between *the woman* and *a woman* here? What do the different determiners tell us about the speaker and the hearer of these sentences?

The first utterance assumes that both speaker and hearer know to whom the NP *the woman* refers, but this is not the case in the second sentence, where the NP *a woman* does not refer to a particular woman known to both the speaker and the hearer. This distinction is called **definiteness** and is typically expressed in English on words that introduce nouns. Definiteness is the means by which the speaker indicates to the hearer that they share knowledge of the referent of a particular noun phrase.

Proper names are also definite NPs; when we use a name in conversation, we typically assume that the hearer understands who we’re talking about.

*Mabel* came in.

Certain quantifiers, such as *every*, *each*, and *all*, are definite as well and perhaps obviously so. The following sentences assume that both the speaker and the hearer (or the writer and the reader, in this case) know to whom the underlined noun phrases refer (and in the case of the quantified noun

**definiteness** means by which the speaker indicates to the hearer that they share knowledge of the referent of a particular noun phrase

phrases, we have no choice, given that the noun phrase refers to all the women who exist!).

*Each/every woman* came in.

NPs with the quantifiers *some*, *several*, and *many* are indefinite and don't assume the kind of shared knowledge expressed by definite NPs.

*Some/many women* came in.

How languages express definiteness is quite complex and not something we can always predict based on the determiner. For example, though noun phrases with *the* are typically definite in reference, this is not always the case.

*The elephant* does not make a good pet.

*An elephant* does not make a good pet.

*Elephants* do not make good pets.

The noun phrase *the elephant* here can have a *generic* interpretation and does not refer to a particular referent. It is semantically equivalent to *an elephant* in the second sentence and to *elephants* in the third one, both of which also have generic interpretations and are indefinite in reference.

Sometimes indefinite determiners appear to be semantically definite. Consider, for example, the following sentence from Heim (1982: 8):

A dog came in. It lay down under the table.

In this sentence, the indefinite pronoun *it* appears to refer to the indefinite noun phrase *a dog*. This suggests that the phrase *a dog* is definite and is the antecedent for the pronoun *it*. Philosophers of language provide complex arguments, however, that suggest that *a dog* in this case is indefinite and that the relationship between *a dog* and *it* is very different from the relationship between the definite noun phrase *the dog* and the pronoun *it* in the following example (see, for example, Evans 1977: 467–536).

The dog came in. It lay down on the floor.

Do you see a difference in definiteness?

## RPE 10.15

### deictic words

words whose meanings can be interpreted only with reference to the speaker's position in space and time (context); the noun *deixis* refers to the pointing or specifying function of such words

## Deixis

Definiteness plays an important role in the larger set of words in the language that are **deictic** (from the Classical Greek word *deiknymi* 'pointing'), words whose meanings can only be interpreted with reference to the speaker's position in space and time; that is, they need context in order to be interpreted appropriately. All languages have deictic words, though some have more than others, and they break down into three main types: personal deictics (first- and second-person pronouns such as *my*, *yours*, and

us), temporal deictics (*now*, *yesterday*, *tomorrow*, and verb tenses: *ate* versus *eat*), and spatial deictics (*there*, *behind*, *left*, *right*, *here*). Even verbs can be deictic. Consider the difference between *Don't go in* versus *Don't come in*. *Go* in the first sentence tells us about the speaker's location, namely, outside the location in question, but in the second, the speaker is inside that location. The meanings of these sentences depend on context. Consider another example: *I left it there*. In this sentence, the interpretation of *there* depends on context, as does the interpretation of the pronoun *I*, whose referent is completely dependent on context. Similarly, in *My book will be published next month*, the interpretation of *next month* depends on context—in April, it will be different from what it was in January. The same is true of the expression *my book*; who *my* refers to depends entirely on context.

Demonstratives (*this/that*, *these/those*) are also definite; both of the following sentences assume shared knowledge of the referent of the italicized phrase.

*That woman* sent me a letter.

*Those students* did well on the exam.

Demonstratives differ from other determiners because they are also deictic; part of their meaning is based on the context in which they are uttered. More specifically, demonstratives indicate *proximity* of certain items distinct from others, what is also called *spatial deixis* (the context of the physical surroundings, often accompanied by pointing).

This book was really good. I've never read *that one*.

Do you like *these flowers*?

No, but I like *those daffodils* over there.

The concepts of definiteness and deixis illustrate the overlap between semantics and pragmatics. Definite and deictic terms have grammatical meanings, but their meanings cannot be construed in the absence of context.

#### RPE 10.16

## Language and Thought

As you've probably gathered by now, the notion of *context* is enormously complex and involves power relationships among speakers that are influenced by a vast array of factors, including age, gender, political and religious beliefs, and knowledge of the world. There clearly is a link, then, between language and culture, between how we talk and how we perceive the world. One question about language that has perpetually fascinated philosophers, linguists, anthropologists, and many others (even you?) is how language influences our thinking. Put slightly differently, how does culture influence language and vice versa? Does one determine the other?

## Did You Know?



## Does Culture Count?

Because we live in different cultures and speak different languages, do we think in different ways? This question has been stirred up by studies of Amazonian tribes who have words that might mean 'one' or 'two' and words that might mean 'a lot' or 'many' but no words for all the numbers that we have. Some scholars claim this is an issue of culture, not language—these tribes don't need exact numbers because they don't use money.

A new study (Spaepen et al. 2011) shows that without access to language, people will not develop a full number system, even though they live in a numerate culture (e.g., holding jobs and using money). Spaepen's team studied Nicaraguan homesigners, deaf people who have not had access to oral language (Spanish) or signed language (Nicaraguan Sign Language), and found that they do not develop a counting system in the same way as people do who have acquired an oral or signed language. To test for numeration, the researcher would knock one, two, or three times on the signer's fist and look for the same number of knocks in return. Though signers would consistently knock twice for two and once for one, for more than three knocks, the researcher might get four or five knocks on her fist.

This study suggests that language, not culture, is at the core of our ability to comprehend and manipulate large quantities of countable things. Although the human brain can assess small numbers (1, 2, 3) and approximate values (20,000 is a lot more than 10), it needs a counting system to specify the difference between 10 and 11 or between 20,204 and 20,207. It is language, not culture, that unlocks this ability.

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## Linguistic Relativity and the Sapir-Whorf Hypothesis

### Sapir-Whorf hypothesis

Benjamin Whorf's claim that language determines our perceptions of the world

A well-known example of the "strong" form of this hypothesis, that language *determines* how we think, was proposed by Benjamin Whorf in the 1950s. Whorf was a student of the linguist and anthropologist Edward Sapir, who also was interested in this question; Whorf's version of this idea is now called the **Sapir-Whorf hypothesis**. Whorf claimed, based on



his study of several languages, that the language of a culture provides a window into how the members of that culture think. More specifically, he claimed that language determines how a culture looks at the world and that cultures that speak different languages as a result think about the world in different ways.

The general idea that language and culture influence each other is called **linguistic relativity**. One common example of linguistic relativity is the idea that if we use gender-neutral language, it will mitigate against sexism in the culture. So, if we use the term *mail carrier* instead of *mail-man*, we might be less apt to think of those in this line of work as male. Here's another example of culture reflected in language: We use the terms *male nurse* and *woman doctor*; attaching gendered modifiers to the terms *nurse* and *doctor* because we think of these occupations as female (nurse) and male (doctor), which reflects our (sexist) perceptions of the world. The language of war is another case in point; references to indigenous peoples as *savages* during periods of colonization or to Jews as *vermin* during the

**linguistic relativity**  
theory that  
language and  
culture influence or  
perhaps even deter-  
mine each other

### Did You Know...?



#### Lost in Translation

How exactly do we translate ideas expressed in one language into another? The answer lies in how we learn the meanings of words. Do we learn the meanings of words simply by connecting them with the objects they refer to? How do we learn the word *kitty*, for example? We might learn it through *ostention*—the meaning of the word is defined by example. Someone says, “Look, it’s a kitty!” and we’d figure, from the way this sentence is constructed, that the word *kitty* is the label attached to the object in question. But philosopher W. V. O. Quine (1960) argues that ostention only works along with our understanding of other facts about the language, namely, our understanding of the frame *It’s a \_\_\_\_*, and so ostention itself depends on some kind of prior knowledge of the language.

What about when we do not have language to help us determine the meaning of a word? In Quine’s famous example, hunters are out with a guide. The guide points to a rabbit that is running by and says, “Gavagai!” What does this utterance mean? It is unfamiliar to the hunters, so what would they think? They might assume that *gavagai* means *rabbit*, but it could mean *long ears*, *tail*, *Look out!* or *There will be a storm tonight* (suppose the guide is superstitious). To find out the meaning of *gavagai*, the hunters would have to do some extensive investigation, examining other uses of the word in order to determine its meaning. What kinds of knowledge would this require?

*For more information*

Fodor, J. 1975. *The language of thought*. New York: Crowell.

Quine, W. 1960. *Word and object*. Cambridge, MA: MIT Press.

Holocaust dehumanized those groups, (ostensibly) licensing their oppression. And using euphemisms (discussed in Chapter 9) such as the term *collateral damage* rather than *civilian deaths* seems to mask the horror of war; what one person might call a *freedom fighter*, another might call a *mercenary* and yet another, a *terrorist*.

## Examining the Evidence

Linguistic relativity is in counterpoint to the idea that language and thought are related but rely, in the end, on different cognitive processes. Consider, for example, the fact that we don't always know how to say what we're thinking. As Steven Pinker (1994) points out, we often remember the gist of

what was said but not the exact words; there has to be a gist, and this meaning doesn't rely on the original set of words (pp. 55–82). Perhaps more important, Whorf's claims have been soundly debunked by further research into his evidence for strong connections between language and how we think. His conclusions were based on his own perceptions of languages and cultures he knew very little of and on faulty translations of sentences. For example, Whorf claimed that, based on the evidence that the Hopi have no way of grammatically expressing past or future time, their worldview did not include these concepts. Anthropologist Ekkehart Malotki (1983) shows, however, that Hopi has a number of ways

of indicating time (through tense, metaphors about time, words for days, weeks, etc.) and that Whorf's claim was completely without merit. This misinterpretation of another culture's language illustrates how our own cultural perceptions can bias our research; the fact that Whorf's idea was (and continues to be) very popular is testament to how hard our cultural perceptions of language are to dislodge, even in the face of contradictory evidence.

So, if language doesn't determine how we think, at least to the degree that Whorf claimed, what is its role in shaping or influencing how we think? First of all, it is clear from what we've discussed so far that language *underspecifies* meaning. That is, we often mean something quite different and more complex from what we actually say based on the meanings of our words. Second, think of the examples of children, aphasics, savants, and others we discussed in Chapter 2. We saw that children acquiring language (and thus without it, at least in its full form) certainly think and communicate. Broca's aphasics are often frustrated precisely because they have many things on their minds that they can't convey given their speech impairments. They are, however, *thinking*, even without language. The opposite is true as well; remember, children with Williams syndrome can talk fluently and with great expression, but their ability to perform other very simple cognitive tasks that require reason are dramatically impaired. And then there's Christopher, the linguistic savant who can

hwaet!

In 2010 Hofstra University began offering the first master's degree program in the USA that specializes in forensic linguistics. [http://www.hofstra.edu/Home/News/PressReleases/112210\\_MAIInForensicLinguistics.html](http://www.hofstra.edu/Home/News/PressReleases/112210_MAIInForensicLinguistics.html)

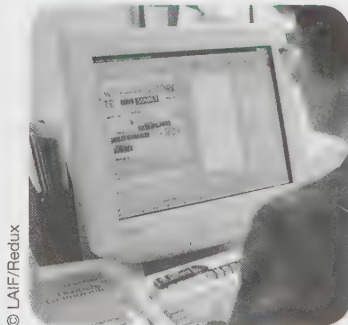
speak several languages fluently but whose other cognitive abilities are severely impaired. Also, just consider actual grammatical differences. Does the fact that a French speaker puts adjectives after the noun rather than before it, as we English speakers do, indicate a difference in perception of the world? How would that perception be characterized? Where do we draw the line between where language does or does not influence thought? Does each grammatical difference among languages illustrate some kind of difference in perception, and if so, why can we translate ideas from one language into another?

### Mentalese

If language doesn't shape our thought, what does? Researchers such as Jerry Fodor (1975) and Neil Stillings and colleagues (1995) argue for a "language of thought," what Steven Pinker calls *mentalese*. All of us, as humans, have the same basic program and use the same basic processes of memory and reasoning, regardless of culture. Some have argued that these mental representations have a sort of grammar of their own, a system based on propositional meanings such as those discussed earlier in the chapter. So, we actually think in mentalese rather than in language, and this accounts for the similar ways in which we construct meaning, regardless of language, and for the fact that language doesn't always capture what we mean. In the words of Pinker (1994: 82): "Knowing a language, then, is knowing how to translate mentalese into strings of words and vice versa."

RPE 10.17

## Accent on Forensic Linguistics



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Because so much of the legal system depends on language both oral and written, it is not surprising that linguistics can provide great insights into the nature and interpretation of legal language and the law. Forensic linguistics is a subfield of linguistics that focuses on the interface of language, the law, and crime. Peter Tiersma (1999) discusses a number of ways in which language and law intersect. One area of study is the history of legal language in English and the influence



of Latin and French—in such terms as *quid pro quo*, *habeas corpus*, *post-mortem*, and *pro bono*, as well as many more common legal terms such as *court*, *justice*, *judge*, *jury*, *decision*, *legal*, *dismiss*, and *jurisdiction*. Tiersma also analyzes lawyers' syntax, including the avoidance of pronouns in legal documents (*the respondent agrees that the respondent will pay . . .*); the use of passive voice to foreground, for example, the victim of an alleged crime and (sometimes purposely) to obscure the perpetrator (*the vehicle was stolen at 5:30 p.m.*); the purpose of archaic terms such as *aforesaid* and *to wit*; and the use of ritualistic language (*All rise . . .*) in order to be precise and to avoid ambiguity. Lexical semantics can be key in deciding a case; for example, whether something is interpreted as *obscene* or *profane* depends on how those terms are defined.

In another branch of forensic linguistics, the language of legal process, experts examine language as it is used in cross-examination, police interviews, the questioning process in court, and evidence presentation, among other contexts. Pragmatics is an essential part of interpreting courtroom discourse; much of what we mean is implied rather than stated, and differences between literal and nonliteral meaning can complicate what it means to tell the truth. Whether a witness is considered believable can also depend on that person's social status, which can be conveyed by accent or dialect just as much as by clothing and appearance.

And finally, linguists like Roger Shuy, Robert Leonard (who used to sing in the doo-wop

band Sha Na Na!), and Robert Rodman provide evidence and expert testimony in cases involving trademark disputes, identification of authors of anonymous texts (such as ransom notes or letters of threat), tracing a speaker's linguistic origins (in the cases of asylum seekers), acoustic analysis of audio-recorded evidence, cross-cultural communication facilitation, and a number of other areas. The photo shows a German federal officer analyzing the grammar in a blackmail letter.

The study of language and the law includes a vast array of topics, such as the language of perjury, language rights (language policies such as the official English movement, bilingual issues, and language preservation), how to improve jury instructions, and even lawyer jokes!

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## Summary

We've seen that beyond the meanings of words, we also construct meaning from sentences and from the context in which sentences are uttered. Understanding and using a language involves a complex interplay of social and linguistic factors, including our cultural expectations, attitudes about



power and solidarity, social conventions, and much more. We've discussed in previous chapters how children acquire a complex grammatical system, and now you can see that in addition to that system, another aspect of language that we seem to acquire is social—how to interact in conversations, manipulate politeness conventions, produce and understand direct and indirect speech acts, and so on. Learning to *use* language may be as complex a process as acquiring the language itself, and both are essential components of our linguistic knowledge. The interaction between meaning and context raises the question of how context, or culture, shapes meaning and language. We've explored here some of the research on the ways in which language might (and might not) shape how we think and view the world.

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## Review, Practice, and Explore

### RPE 10.1 Propositions and Truth Conditions

Which of the following sentences contain propositions? Which propositions are true, and which are false?

- a. Eat your cereal!
- b. Did you eat your cereal?
- c. I ate cereal this morning.
- d. I didn't eat cereal this morning.
- e. The dog ate cereal this morning.
- f. The dog ate cereal this morning, didn't he?
- g. Should dogs eat cereal?
- h. Dogs never eat cereal.

**RPE 10.2** Analytic and Synthetic Sentences

Label the following sentences as analytic (A) or synthetic (S).

- a. Lions are felines.
- b. Lions are carnivores.
- c. Lions can be fierce.
- d. Lions live only in certain parts of the world.
- e. Lions are animals.
- f. I like lions.
- g. You don't like lions.

**RPE 10.3** Entailment

Write down as many entailments as you can for the following sentences. A sentence may have more than one entailment or may have no entailments.

- a. Lions are animals.
- b. Lions live only in certain parts of the world.
- c. Lions are carnivorous.
- d. Lorraine is my mother's sister.
- e. Lorraine is my friend.

Do the following sentences have the same entailments? Why or why not?

- f. The puppy devoured the pizza.
- g. The puppy ate the pizza.

What entailments are expressed by the following ambiguous sentence?

- h. The movie star met the journalist in a tux.

Paraphrase the following sentences. Remember that paraphrases have the same meaning but different word order, and any entailments remain the same.

- i. Lorraine loves going to the Bahamas in the winter.
- j. The baby gave the rattle to his mother.
- k. The students handed in their papers.
- l. The ball rolled under the bed.

**RPE 10.4** Contradictions

Make up three sentences that are contradictions because of the interplay of words that express logical relationships, such as *all*, *every*, *some*, *and*, *or*, *but*, and *if*.

**RPE 10.5** Presupposition

Some of the following sentences include presuppositions. Write the presupposition down for each sentence. What propositions do we infer or assume in each sentence?

- a. Do you want to go bowling again?
- b. Her husband is a banker.
- c. Have you stopped eating meat?

- d. Do you eat meat?
- e. Why did you steal the money?
- f. Einstein discovered relativity.
- g. I have already donated to the cause.

### RPE 10.6 Thematic Roles

Assign the most appropriate thematic role to each of the underlined NPs:

- a. Francine rode her bike to the party.
- b. Elvis ate peanut butter with a spoon.
- c. Bess gave the waitperson a nice tip.
- d. Ariadne saw the dog at the pound.

Make up sentences in each of which *the child* is the subject but in which it has a different thematic role in each case. You'll have to change the verb in each sentence you make up.

- a. *The child* saw the teacher leave the building.  
experiencer
- b. *The child*  
agent
- c. *The child*  
patient
- d. *The child*  
goal

### RPE 10.7 Direct and Indirect Speech Acts

Identify each of the following as a direct or an indirect speech act. Explain briefly why you identify them as you do. Does sentence type correlate with meaning?

1. Please read the assigned reading by Monday.
2. Could you pick up the trash over there?
3. Did you see the movie last night?
4. I would like to know how many of you finished the assignment.
5. Do your chores!
6. Do you want that window open?
7. Move your car out of the way!
8. Can you please move your car?
9. Please move your car.
10. Your car is in the way.

### RPE 10.8 Performative Speech Acts

Speech acts are called *performative* when uttering them is an act in itself rather than reporting on an act. For example, if someone says "I saw a cat run under the porch," they are asserting that they saw this event and are reporting on it. If a judge in court says "I order you to spend six days in jail," that statement performs an action: It legally binds you to serve your jail time. Which of



the following speech acts are performative? (*Hint*: You can usually insert *hereby* in performative speech acts but not in nonperformative ones.) What conditions must be satisfied for these acts to be performative? Are there conditions under which the sentence would *not* be performative? Explain briefly.

- a. John hopes to be there on time.
- b. SAFE! (yelled by the umpire in a baseball game)
- c. I christen you the H.M.S. *Titanic*.
- d. I will pay you the money I owe you.
- e. I promise to pay you the money I owe you.
- f. Yesterday, Joe promised to pay the money he owes Jack.
- g. Did Joe promise to pay Jack the money he owes him?
- h. Louise knows that pigs can fly.
- i. Joachim decreed that pigs can fly.

Performatives can be rather tricky. Discuss some of the issues that are raised when we try to determine whether the following sentences are performative.

- j. Checkmate! (spoken by a player in a chess game who has checkmated his opponent)
- k. Checkmate! (spoken by a player in a chess game who has not checkmated his opponent)
- l. Checkmate! (spoken in a context other than a chess game)

### RPE 10.9 Grice's Maxims of Conversation

- A. Make up a (plausible) conversational exchange in which Grice's maxims are followed. Explain briefly how each maxim is satisfied.
- B. Come up with a (plausible) conversation in which at least one of Grice's maxims is violated. Explain why the violation might take place and what inferences the speakers and hearers could use to make sense of the utterances. (Remember that a violation doesn't necessarily mean that the conversation breaks down; it is often the result of *maxim clash*, wherein a maxim is violated but the cooperative principle maintained.)
- C. Now, come up with an example of a conversational exchange in which at least one of Grice's maxims is flouted. Does the conversation break down or not? Explain briefly.

### RPE 10.10 Positive and Negative Politeness

Referring to Table 10.2, make up one conversation in which a speaker uses positive politeness and one in which a speaker uses negative politeness, and then answer the following questions:

- A. How does context influence the situation?
- B. What is the relationship between the two speakers, and does that matter?
- C. In what kinds of situations are we more likely to use positive politeness, and in what situations might we use negative politeness?
- D. In your conversations, what are some examples of direct and indirect speech acts?

### RPE 10.11 Gender Differences in Conversation

It has long been argued that men and women have different speech styles and conversational practices. More recent work in language and gender studies has shown, however, that

generalizations about men and women are impossible and that gender interacts with a number of other variables, such as age, ethnicity, social class, and sexual orientation, in shaping our speech styles and practice. What are some current issues and arguments about gendered language? Is it possible to claim that men and women talk differently and use different conversational and politeness strategies? (Some good resources include Cameron 2007, Tannen 2006, Eckert & McConnell-Ginet 2003, and Wolfram & Schilling-Estes 1998.)

### RPE 10.12 Terms of Address

One way to express status and respect in English is with terms of address. Perhaps as a reflection of changing attitudes about such relationships, however, this system is in a state of flux, leaving many of us unsure of how to address certain people. These days, more adults are likely to be called by their first names by children; use of the terms *Mr.* and *Ms.* is waning. Even in elementary and secondary schools, teachers are asking their students to call them by their first names. For many, this confusion about what to call someone can result in “no-naming,” calling that person by no name at all! College professors frequently experience this situation if they haven’t told their students what they would like to be called. Discuss what factors you use when trying to determine how to address someone; consider age, gender, occupation, and level of schooling, among other factors. Is there a situation in which you choose the no-naming strategy? Why? Is politeness at work?

### RPE 10.13 Style-Shifting: Conversational Register

We shift registers often and unconsciously, depending on where we are, who we’re talking to and why, and so on. Describe three different registers you might use and the context in which you would use each. Describe the context, the speakers involved, and any other factors that you think contribute to your choice of register. What kinds of vocabulary, sentence structure, accent, and so forth do you use in shifting from one register to another? Give examples to illustrate. (*Hints:* Do you use contractions such as *gonna* or *wanna* in one register but not another? When would you choose a more formal term over a more informal one? In what situations would you use euphemisms? When do you say *yeah*, and when are you careful to say *yes* or maybe even *yes, ma’am?*)

### RPE 10.14 Cross-Cultural Conversations

What are some of the conversational practices of a culture other than your own? Do the maxims of conversation seem to apply as they do in your own speech community? Give examples of how maxims might be violated, flouted, or even maintained in different ways in another cultural context. Discuss cross-cultural differences in politeness conventions such as honorifics, terms of address, and other conversational practices. Are direct and indirect speech acts used in different ways?

### RPE 10.15 Definiteness and Geographical Place Names

Do you say *Rocky Mountains* or *the Rocky Mountains*? Most native English speakers agree that *the Rocky Mountains* sounds better than *Rocky Mountains* when referring to the geographical location. Likewise, *Lookout Mountain* somehow sounds better than *the Lookout Mountain*. For the following list of place names and your local landmarks, do they sound better with or without the definite determiner *the*?

Great Salt Lake  
Lake Whatcom  
Colorado River  
Mississippi River  
Nooksack River  
Black Hills  
Nob Hill  
Eagle Lake  
Whatcom Creek  
Heron Creek

What is the rule that determines whether *the* occurs with a proper name for a natural landmark? Discuss why you think this might be.

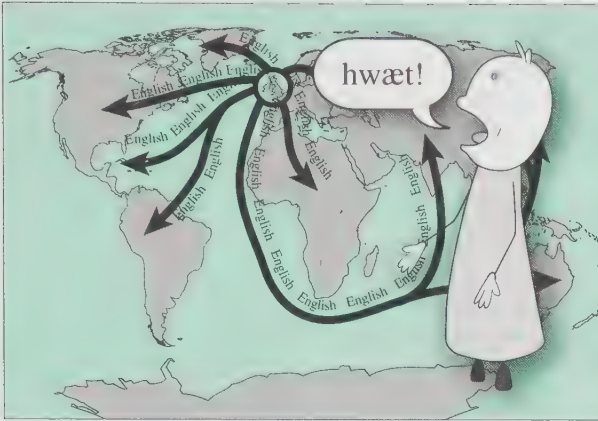
**RPE 10.16** Deixis

Explain how each of the following sentences uses deixis.

- a. We're going on vacation this summer.
- b. I walked to the store.
- c. I walked from the store.
- d. I walk to the store.
- e. Come on over here!
- f. John bought that new car.
- g. The cat is over there behind the couch.

**RPE 10.17** Language and Thought

Pullum (1991) outlines the development of the myth, based on “research” by Benjamin Whorf, that “Eskimos” (a misnomer right there) have “bucketloads” of words for snow and that this is evidence for the Sapir-Whorf hypothesis. Research this myth (using resources in addition to Pullum’s book). What evidence is there against Whorf’s claim?



## Chapter at a Glance

# The Early Story of English

## Key Concepts

- Indo-European, one language family among many, includes languages spoken across Europe and into Asia, including English.
- We can trace the development of English from Old English (449–1100) to Middle English (1100–1500) to Early Modern English (1500–1800) to Present-Day English.
- The stages of English can be identified by syntactic, morphological, phonological, and lexical differences, as well as by differences in spelling.
- As English changes, so do attitudes about language and language authority, and we see the rise of the idea of “correct” English and prescriptive grammar in eighteenth-century England.

## Did You Know . . . ?

Pretty Grimm Tales  
 Why Was Alfred So Great?  
 Runic Writing and the *Futhorc*  
 The Black Death, Rats, and Fleas  
 The Word According to Johnson

**Language Alive!** False Cognates  
 Pagan Fossils

**Linguistics in the News** Languages and Land Bridges

**Accent on** Philologists

## Finding Families: The Comparative Method

Indo-European Language Families  
 Beyond Indo-European:  
 Other Language Families  
 The Germanic Branch of  
 Indo-European

## English Emerges in the British Isles

Old English Vocabulary  
 Old English Morphology  
 Old English Syntax  
 Old English Phonetics and  
 Phonology

## English Meets French: Middle English

Middle English Vocabulary  
 Middle English Morphology  
 Middle English Syntax  
 Middle English Phonology

## English Established

The Birth of “Correct”  
 English and Prescriptive  
 Grammar  
 Early Modern English  
 Grammar  
 The Early Modern English  
 Vocabulary Explosion

## Summary

## Sources and Resources

## Review, Practice, and Explore



*Not only does the English language borrow words from other languages, it sometimes chases them down dark alleys, hits them over the head, and goes through their pockets.*

—EDDY PETERS

In previous chapters, we've talked about how language changes and varies, and you've seen examples of varieties of English spoken around the world today. You've also seen examples of English during some of its developmental stages: Old English, Middle English, and Early Modern English.

Here, we'll explore how languages change over time, with special attention to the history of English, its origins in the British Isles over a thousand years ago, and how Present-Day English (PDE) can be traced back to Old English, a language that looks completely foreign to speakers of today's English. We'll see how Old English developed over time into Middle English and then into Early Modern English, and we'll discover how this development was shaped by a series of political and cultural events and also, sometimes, by nothing obvious at all.

We'll also study the ways in which other languages are related to one another and to English, and we'll look at the evidence for language families, related languages that can be traced back to a common ancestor. We'll see evidence that many languages, spoken from Europe to India, have evolved from a single ancestor—or “mother”—language called **Proto-Indo-European**, and that English is a member of this family, part of the subfamily of Germanic languages. We will introduce you to some of the other language families that have been discovered through the study of language change over time, or **historical linguistics**, and we will take a look at the kinds of evidence and methodology that historical linguists use to determine how languages develop, change, and branch off from one another.

**Proto-Indo-European** reconstructed parent language of members of the Indo-European language family, which spans Eastern and Western Europe and parts of Asia

**historical linguistics** study of how languages change over time

## Finding Families: The Comparative Method

The year 1786 is often given as the year of the beginning of the study of historical linguistics. In that year, Sir William Jones gave a speech at the Royal Asiatic Society in Calcutta, India. Though his paper was primarily about the culture, religion, and people of India, what he had to say about language has had a lasting effect. Most notably, Jones discussed Sanskrit (from which most languages of India are descended) and the commonalities among Sanskrit, Greek, Latin, and Gothic (more broadly understood now

as Germanic). Others had noticed these similarities, but Jones went further than they had, saying that these languages must have come from a common source language (what is now known as Proto-Indo-European). The ideas put forth in Jones's lecture formed the basis for the *comparative method* of linguistics. From that point forward, the study of language was no longer a branch of religion or philosophy but a legitimate area of study in its own right, which paved the way for modern linguistics.

**comparative method** technique of linguistic analysis that compares lists of related words in a selection of languages to find cognates

**cognates** words (with the same basic meaning) descended from a common ancestor

**regular sound correspondences** predictable sound changes across languages that show they are related

The **comparative method** is a technique of linguistic analysis that compares lists of related words in a selection of languages. **Cognates** are words descended from a common ancestor, not just words that happen to look like each other. For example, the word for 'father' in Latin is *pater*; in French, *père*; and in Spanish, *padre*. This similarity suggests that all these words come from a common root language (Latin) and are in the same language family (the Italic family). The word for 'father' in English is related to *Vater* in German (*v* is pronounced as /f/ here). This suggests that English and German are related in a similar way and are part of the Germanic language family. Taking this comparison a step further, when we find that other words that begin with *p* in Italic languages show up in Germanic languages beginning with *f*, then we have what is called a **regular sound correspondence**. So, for example, the words for 'fish' in Latin, French, and Spanish (*pisces*, *poisson*, and *pescado*, respectively) all begin with *p*, and the words for 'fish' in German and English begin with *f* (*Fisch* and *fish*, and *fisk* in Danish, another Germanic language). This suggests that the Italic and Germanic language families themselves may descend from a common root language. Further, scholars have shown that Italic and Germanic are members of the larger language family Indo-European, and that languages in this family descend from a common root language, Proto-Indo-European. It's important to remember that there are nearly 7,000 languages spoken and signed in the world today, and that Indo-European is only one of about a hundred language families. The Indo-European languages are the most widely studied in the world, and more than half the world's population speaks an Indo-European language as a first or second language.

Table 11.1 gives examples of words in five Indo-European languages and then the reconstructed Proto-Indo-European (PIE) root word. From lists like these, regular sound relationships are established and a possible proto-form (hypothetical word) is proposed (traditionally indicated by the asterisk).

Table 11.2 shows the words for numbers from one to three in both Indo-European and non-Indo-European languages. Can you pick out the non-Indo-European one(s)?

As you may have guessed, L1 (Italian), L4 (Avestan), and L5 (Wendish) are Indo-European, but L2 (Mongolian) and L3 (Vietnamese) are not.

Table 11.1

Proto-Indo-European Word Roots

Sanskrit	Greek	Latin	Gothic	English	PIE Root	Meaning
pita	pater	pater	fadar	father	*pater-	father
padam	poda	pedem	fotu	foot	*ped-	foot
bhratar	phrater	frater	brothor	brother	*bhrater-	brother
bharami	phero	fero	baira	bear	*bher-	carry
jivah		wiwos	qius	quick	*gwei-	live
sanah	henee	senex	sinista	senile	*sen-	old
virah		wir	wair	were	*wiro-	man

PIE = Proto-Indo-European; \* = possible protoform

Table 11.2

Numbers in Indo-European and Non-Indo-European Languages

L1	L2	L3	L4	L5
uno	nigen	mot	aeva	jedyn
due	khoyar	hai	dva	dwaj
tre	ghorban	ba	prayo	tři

hwæt!

Russian Empress Catherine the Great sent scholars to all parts of Russia to collect words in the late eighteenth century. She then compiled many of the word lists herself, which scholars still use today.

hwæt!

Grimm called the sound change a law because he believed there were principles governing these changes that were similar to the laws of other sciences, such as physics.

Several other scholars made important contributions to historical linguistics and the comparative method. The Danish linguist Rasmus Rask (1787–1832) worked out many of the relationships among the languages now known as members of the Indo-European language family. He died fairly young, however, and never received much credit (so we will give him some here!).

Jacob Grimm (1785–1863) took things much farther than Rask—he talked about natural classes of sounds, or sounds that share similar features (remember natural classes from Chapter 3?). He worked out some of the systematic sound changes among the languages. He agreed that the reason for the similarities across the languages he was studying was their common ancestor.

Grimm is best known in linguistics for coming up with what is now known as Grimm’s Law, a sound shift that took place in all the Germanic languages, distinguishing them from the other non-Germanic Indo-European languages. Grimm noticed that everywhere certain sounds occurred in both Sanskrit and Latin, certain other sounds occurred in Germanic (and now in English).

## Did You Know...?



## Pretty Grimm Tales

You might recognize Jacob Grimm when you know he and his brother Wilhelm are responsible for compiling the famous collection of more than a hundred fairy tales. In the early nineteenth century, when the Grimm brothers lived and wrote, there was not yet a Germany as we know it but rather a collection of smaller countries. Part of what motivated the Grimm brothers' work was a desire to establish a German identity. The Grimms didn't do their linguistic work and their tale collecting to entertain; both endeavors involved studying the past to find out more about the present.

The Brothers Grimm recorded the old stories as they knew them, but the stories were too scary for many readers and listeners so there was a movement to revise the fairy tales so they wouldn't promote nightmares across the land! The edited versions, though they might end happily ever after, are said to maintain the meat of the messages.

## Indo-European Language Families

A tree of the Indo-European language family and the languages that came from PIE is given in Figure 11.1. The Indo-European language family tree that we have today is thought to quite accurately reflect the relationships among the languages indicated. Realize, however, that it is somewhat misleading in the way that it suggests that each language branched off from a parent language at the same time. It is not, of course, the case that one day—bam!—everyone who had spoken one language suddenly began to speak a different language. Each branch developed very slowly over hundreds to thousands of years. However, the tree remains a very useful way of graphically representing the relationships among languages.

## hwaet!

The regular sound correspondences are at work in the naming of *Star Wars'* Darth Vader, the evil father of Luke Skywalker, don't you think?

## Celtic

The Celtic languages likely dominated Western Europe around 400 BCE; the people then migrated to what became the British Isles about 2,000 years ago. When Germanic tribes arrived in the British Isles, they pushed the Celtic-speaking people into what is now Wales, Ireland, and Scotland and to Brittany in France. Though these languages still have some speakers, other Celtic languages are now extinct: Cornish, Gaulish, Manx, Cumbrian, Pictish, and Galatian.

## Italic

From the Italic language family, also known as Latin or Romance, we get Italian and Portuguese (these two are the most like the original Latin), Spanish, French, Romanian, Rhaeto-Romansch (a language still spoken in



# Language Alive!

## False Cognates

Cognates can be very tricky because we often assume words are related which aren't. For example, German *Ratte* and English *rat* are indeed cognates and historically related. But the German *Rat* (pronounced with a long a sound) is a *false cognate* of English *rat*; the words look the same but are historically unrelated. German *Rat* means 'council'.

False cognates can get you into trouble. The Parker Pen Company's slogan "It won't leak in your pocket and embarrass you" was translated into Spanish for the Latino market. The translation incorrectly used the false cognate *embarazar* for *embarrass*; the message became "It won't leak in your pocket and *impregnate* you." The Spanish verb *embarazar* means 'to impregnate', not 'to embarrass'. The Spanish verb meaning 'embarrass' is *avergonzar*.

*For more information*

Serva, S. 2003. iLanguage: Translations for global research. *EContent, Digital Content, Strategies and Resources* 26(1). 51. <http://www.econtentmag.com/Articles/ArticleReader.aspx?ArticleID=1038>

## hwæt!

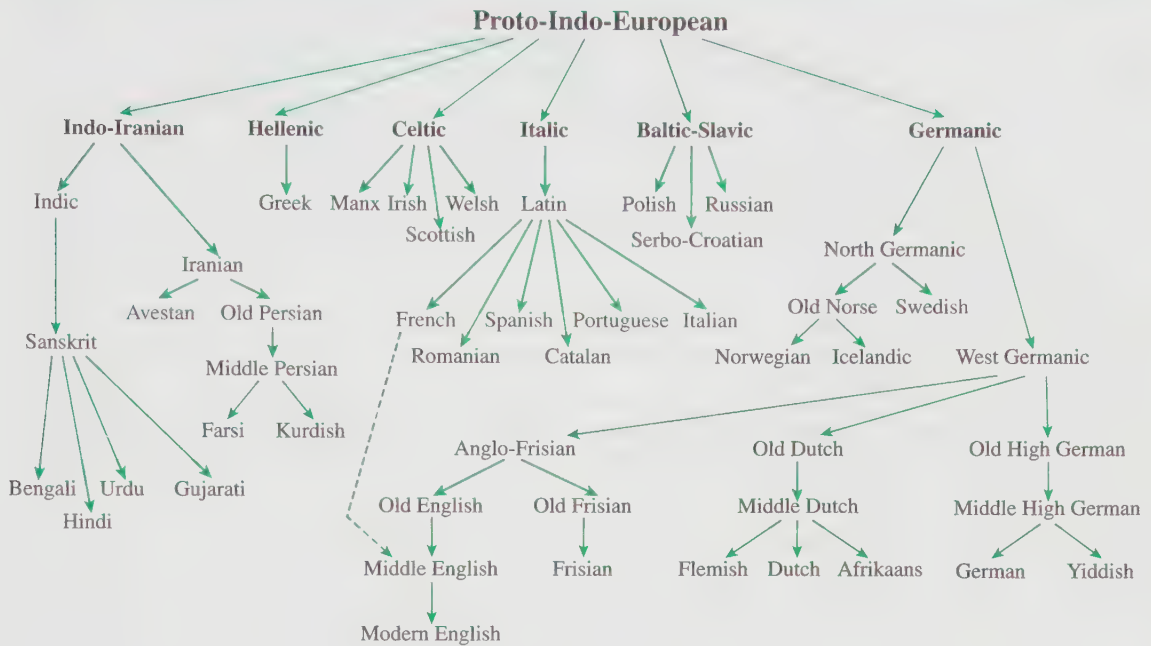
The dog breed Dalmatian was bred to guard the borders of Dalmatia (now in Croatia), the homeland of the speakers of the extinct Dalmatian language.

Switzerland), Ladino (a language spoken by Jews from Spain who were exiled in the fifteenth century and now live in Turkey and Israel), Walloon (a variety of French spoken in Belgium), Sardinian, and Canadian French. Catalan, spoken in the northern part of Spain, and Provençal, spoken in the south of France, round out the Italic languages that are still spoken. Extinct languages include Dalmatian, Oscan, Faliscan, Sabine, and Umbrian.

## Hellenic

The only language still spoken from the Hellenic branch is Modern Greek. Ancient Greek is believed to be one of the oldest languages of the Indo-European family, with three well-established stages: Archaic, or Ancient, Greek (ninth–sixth centuries BCE), Classical Greek (fifth–fourth centuries BCE), and Hellenistic Greek (third century BCE–sixth century CE). This Hellenistic stage is known as Koine, meaning 'common', or Biblical, Greek. Mycenaean, for which there are a great number of inscriptions on clay tablets, was spoken about 1300 BCE, and we know that the Ancient Greek epic *The Iliad* was written around 700 BCE. The main varieties of Ancient Greek were Doric, Ionic, Aeolic, and Attic; this last one is also known as Classical Greek. Today's Modern Greek stems from the medieval period's language variety, which in turn descended from Koine.

Figure 11.1 Indo-European Language Family Tree



## Baltic

The two languages of the Baltic family that are still spoken are Lithuanian and Latvian, spoken in Lithuania and Latvia, respectively. Lithuanian and Latvian diverged from each other around 800 CE and likely continued as mutually intelligible dialects until at least the fifteenth century. Old Prussian is an extinct member of this family.

## Slavic

The Slavic languages, spoken in Eastern Europe, are believed by some to be so closely related to the Baltic language family that they form a single branch, the Balto-Slavic family. The Slavic languages include Bulgarian, Russian, Polish, Czech, Slovak, Slovene, Macedonian, Bosnian, Ukrainian, Byelorussian, Kashubian (spoken in Poland), and Sorbian (spoken in parts of eastern Germany).

## Indo-Iranian

The languages of the Iranian subfamily are all descended from Ancient Persian, which was the literary language of the Persian Empire and one of the great classical languages alongside Greek, Latin, and Sanskrit. Currently, the

most widely spoken language is Farsi, spoken in Afghanistan and Iran and also known as Persian, Iranian, or Dari. Kurdish is spoken in Turkey, Iran, Iraq, and Syria by the Kurds. Baluchi is spoken in Iran, Afghanistan, and Pakistan; Pashto is also spoken in Afghanistan and parts of Pakistan; Ossetian is spoken in Georgia; Tadjik is spoken in Tadjikistan and northern Afghanistan.

The languages of the Indic branch of the Indo-Iranian family are spoken primarily in India and are all descended from Sanskrit, the classical language of Hinduism. Hindi and Urdu are very similar languages, but Hindi is spoken by Hindus and is written in the Sanskrit writing system called Devanagari (which means ‘writing of the gods’), while Urdu is spoken by Muslims and is written in Arabic script.

### Armenian

Armenian is a language, not a family, but it is thought to be the only surviving language of what was once a larger family. Armenian is spoken in Armenia and Nagorno-Karabakh in Azerbaijan. Extinct languages include Dacian, Thracian, and Phrygian.

### Albanian

Albanian is another sole survivor of what was once a larger language sub-family. Albanian is also known as Shqip. Illyric and Mesapian, which used to be spoken in parts of Italy, are two extinct members of this family.

### Germanic

A language variety we now call Germanic was probably spoken in the mid-first century BCE. Those who spoke Germanic didn’t write their language, so we really don’t know much about it. Proto-Germanic is to German, Dutch, the Scandinavian languages, and English what Latin is to Italian, French, and Spanish. And while there is a great deal written in Latin, and Latin records go back about 2,500 years, there is nothing written in Proto-Germanic. Written records in Germanic begin only about 300 CE with a few Scandinavian inscriptions, and the earliest written records in English are from about 700 CE. Proto-Germanic gradually divided into what are now known as North Germanic, West Germanic, and East Germanic, as indicated in Figure 11.1. (The East Germanic branch does not appear in the figure because all of its members, including Gothic, are now extinct.)

## Beyond Indo-European: Other Language Families

Nearly 7,000 languages are spoken today, and many of them are from language families other than Indo-European; the *Ethnologue* website lists 116 language families (Lewis 2009; [http://www.ethnologue.com/family\\_index.asp](http://www.ethnologue.com/family_index.asp)). We list only a few of the families in Table 11.3; it is important to note that not everyone agrees on the classifications presented here, and you may find some

**Table 11.3** Some Language Families of the World

Family	Sampling of Members	Main Areas Where Spoken
Uralic	Hungarian, Finnish, Siberian language, Mordvin	Europe
Altaic	Turkish, Uzbek, Mongolian, Korean, Japanese	Europe, Central Asia, Mongolia, Far East
Sino-Tibetan	Mandarin and Cantonese	Asia
Malayo-Polynesian	Malay, Indonesian, Maori, and Hawaiian	Island nations of Southeast Asia and the Pacific Ocean, continental Asia, Madagascar
Iroquoian	Mohawk, Seneca, Huron	North America
Afro-Asiatic	Arabic and Hebrew	North Africa and Middle East
Caucasian	Georgian and Chechen	Caucasus Mountains
Dravidian	Tamil, Malayalam, and Kannada	India
Austro-Asiatic	Vietnamese and Khmer	India to Vietnam
Niger Congo	Swahili, Shona, Xhosa, Yoruba, and Zulu	Africa, south of the Sahara Desert
Nilo-Saharan	Luo, Songhay, Dinka, Nubian	North Africa, Upper Nile region
Khoisan	Nama, Sandawe, Hadza	Southern and eastern Africa
Eskimo-Aleut	Inuit, Yupik, Aleut, Atka, Inupiaq	American Arctic
Uto-Aztecan	Hopi, Comanche, O'odham	Western U.S., Mexico
Mayan	Ch'olan, Quiche, Yucatec	Northern Central America, Meso-America

Source: Lewis, M. P. (ed.). 2009. *Ethnologue: Languages of the world*, 16th edn. Dallas, TX: SIL International. Online version: <http://www.ethnologue.com/>. Used by permission of SIL International.

**RPE 11.2**

of these languages classified differently elsewhere. (There is some controversy, for example, over whether Japanese is a member of the Altaic family.)

## The Germanic Branch of Indo-European

Though scholars rely a great deal on regular sound correspondences to discover the relationships among languages, this is only one type of evidence for such relationships. Many linguistic changes resulted in a unique branch distinguishing Germanic from the other Indo-European languages. Tense and aspectual inflections on verbs came to be expressed by separate words except in two tenses, past and present. So, in Present-Day English, we can say *walks*



**Grimm's Law**  
system of regular sound correspondences, discovered by Jacob Grimm, that distinguishes Germanic languages from others in the Indo-European family; also called the First Sound Shift

or *walked*, but other tense and aspectual distinctions are made up of verb phrases: *will walk*, *have been walking*. Other branches of Indo-European use a single word to express some of these other tenses and aspects (in French, for example, ‘will walk’ is a single word: *marchera*). Another factor that distinguishes Germanic from other Indo-European languages has come to be known as **Grimm’s Law** (also called the First Sound Shift). This generalization about sound change shows that where certain sounds occurred in both Sanskrit and Latin (represented here as *IE*, or Indo-European), certain other sounds occurred in the Germanic languages (*Gmc*), including English.

Grimm’s Law

IE Gmc	IE Gmc	IE Gmc
b → p	p → f	bh → b
d → t	t → θ	dh → d
g → k	k → x (→ h)	gh → g

voiced stops → voiceless stops    voiceless stops → voiceless fricatives    aspirated stops → unaspirated stops

If one compares, say, modern French and Spanish words with English ones, you can see the evidence for these sound changes. For example, consider the word *deux* in French or *dos* in Spanish, both meaning ‘two’. The Indo-European < d > became < t > in Germanic (*zwei*, in which the initial sound is actually /t/, *two* in English, *twee* in Dutch). Another example is the word *père* in French or *padre* in Spanish, both meaning ‘father’; here, the Indo-European < p > became < f > in Germanic. Also, because English has borrowed many words from Latin, Greek, French, and Spanish, a great many English words that are of non-Germanic origin did not, therefore, undergo the Grimm’s Law sound shift. Consider pairs such as *horn/cornucopia*, *heart/cardiac*, and *tooth/dental*; the second word in each pair is borrowed from a non-Germanic Indo-European language and therefore did not undergo the shift.

The sound changes associated with Grimm’s Law are an example of a change for which there is no apparent reason. This doesn’t mean it is a *linguistically* random change, however. There is a systematicity to the sound changes: voiced stops become voiceless, aspirated stops become unaspirated. One would not find sound changes in which features of sounds acted unpredictably; for example, we never find that voiced stops become voiceless nasals. So, even though we don’t know why such changes happen, we do know that they happen in predictable ways with respect to phonetic features and phonological rules.

In addition to the sound changes and the two-tense (past and present) verb system, several other features distinguish the Germanic branch of Indo-European from other branches of that family:

- a common, distinctive vocabulary
- an alveolar suffix for the past tense

- “strong” versus “weak” adjectives
- a fixed stress accent

We discuss these features in later sections.

Interestingly, English exhibits some of these features, but the language has undergone so many changes since its origins in the British Isles that not all of these features are still present in the language. We will see how these features did exist in earlier varieties of English, however.

Such systematic differences allow scholars to distinguish certain languages and certain families from others, as illustrated in the family tree model. So, from Proto-Indo-European (which comprised several hundred languages) to Germanic (with about fifty languages) to West Germanic (which includes German, English, and Dutch), we arrive at the branch that includes English. This branch is sometimes called the Anglo-Frisian branch. Never heard of Frisian, the closest relative of English? We’ll see where Frisian is spoken and why it is related to English as we investigate the primary historical events that led to English as we know it.

### RPE 11.3

## English Emerges in the British Isles

As far as we know, Celtic people lived in what is now the British Isles for many centuries—even before Julius Caesar’s invasions in 55 BC and 54 BC. Contact with the Romans continued, and about a hundred years later, the Romans were firmly established in Britain. The Roman occupation of England lasted for several hundred years. Despite the long occupation, the British Celts continued to speak their own languages. The Celtic languages still spoken in Britain are Welsh, Irish Gaelic, and Scots Gaelic. We know from an account called *Ecclesiastical History of the English People* (*Historia ecclesiastica gentis Anglorum*, written in Latin by a monk named Bede and completed around 730—almost three centuries after the events!) that in 449 the Anglo-Saxon adventurer-warriors from what is now Germany and Holland landed in the British Isles. (What we don’t know is how accurate Bede’s account is, written so long after the fact; it’s likely that what happened was a bit more complicated and more gradual than Bede’s account suggests.) Bede wrote that word reached the continent of the cowardice of the Celtic peoples and the fertility of the island, and in the course of the next hundred years or so, more and more Angles, Saxons, and Jutes, “from the most powerful nations of Germania,” arrived in the British Isles. In addition to the tribes known as the Angles and the Saxons, there were also the Frisians and probably other tribes as well, likely all speaking a number of closely related, probably mutually intelligible dialects of a single Germanic language. (Aha! There are the Frisians, whose descendants still live in Friesland, off the coast of the Netherlands, and who speak a language closely

# Language Alive!

## Pagan Fossils

The following names for the days of the week derive from the names of Scandinavian gods:

Monandæg	the moon
Tiwesdæg	Tiw, god of war
Wodnesdæg	Woden, supreme deity
Thorsdæg	Thor, god of war
Frigedæg	Frige, goddess of love

*Saturday*, however, means simply ‘day of the planet Saturn,’ and Sunday, of course, means day of the sun. These words, along with *Yule*, the name of the midwinter festivities celebrated by the Anglo-Saxons and now synonymous with *Christmas*, are some words taken from pagan religions, absorbed into Christian culture, and then given Christian meanings. The Old English word *god* also has its roots in pagan rites of sacrifice.

related to English.) The descendants of these people, it seems, only about a century and a half later, were already beginning to think of themselves and their speech as English (*englisc*). The name of a single tribe was adopted as a national name, *Engle*, and ‘the land of the Angles’ was *Englaland*.

The time now known as the Old English period is usually assumed to extend from 449, the date Bede gives as the first landing of the Anglo-Saxons, to about the year 1100. Historians differ over the nature of the interactions between the Germanic invaders and the Celtic-speaking Britons. The fact that the remaining Celtic languages are spoken in the borderlands—in Wales and Cornwall, in Ireland, and across the water in France (in the area now known as Brittany)—suggests that the English did not simply absorb the Celts. DNA analysis confirms that there was not a great deal of assimilation among the groups. However, because most Anglo-Saxons were not literate, we do not have any written accounts of what actually took place.

## Old English Vocabulary

One of the ways we determine whether languages are members of a particular branch of Indo-European is to see whether those languages share a distinctive vocabulary. Here, as we trace the origins of English, we’ll also trace the development of Old English vocabulary, the words Old English has in common with other Germanic languages, as well as the words borrowed into Old English from non-Germanic languages.

Even though the Anglo-Saxons were in contact with Celts in England for many years, there are only a few Celtic **loanwords**, or words borrowed from

**loanwords** words borrowed into a language from another language

Celtic languages, in English. The Old English word *cross* comes from the Irish (Celtic) *cross*, (the cognate in Latin is *crux*), and other loanwords include *bin*, *bog*, *dun*, and *hog*. A few Celtic place-names made their way into English (in their modern forms): *Thames*, *Dover*, *Cornwall*, *Carlisle*, *York*, *Rochester*, and *Avon*. Place-names of Anglo-Saxon origin include those with *-sex*, *-ford*, *-ham*, *-shire*, *-bridge*, and *-bury*, among others: *Sussex*, *Wessex*, *Oxford*, *Nottingham*, *Berkshire*, *Cambridge*, and *Canterbury*. Latin had a huge impact on English vocabulary, contributing many of the terms associated with the Christian religion, including *abbot*, *alter*, *mæsse* ('mass'), *candel* ('candle'); and the Old English words *nunne*, *biscop*, *engel* ('angel'), and *deofol* ('devil') all derive from Latin or Greek words. English words also made their way into religious vocabulary, giving rise to synonym pairs that exist today. The Latin *sanctus* ('holy'), *deus* ('god'), and *spiritus* ('spirit/ghost') have the Old English synonyms *hālig*, *god*, and *gaāst*.

From the eighth to the eleventh centuries, Viking raiders—Swedes, Norwegians, and Danes who spoke a related Germanic language now called Old Norse—repeatedly attacked the English. They targeted monasteries and their libraries along the coast, destroying many books in Old English and Latin. The legendary King Alfred was king of Wessex at the time. Aware that his forces could not defeat the Vikings, Alfred allowed them to settle in the northern part of the country in an area called the **Danelaw**.

Over time, the people began to live peaceably together. Their languages, formerly Old English and Old Norse, which were already quite similar, began to merge. A great many words of Old Norse origin were borrowed during this time and thus became English words.

Several things are noteworthy in this list of borrowings from Old Norse. One is the borrowing of the pronouns *they*, *them*, and *their*, which replaced the Anglo-Saxon *hie*, *hiera*, *him*. When languages come in contact, they very rarely borrow pronouns but rather borrow nouns, verbs, or adjectives; scholars aren't

**Danelaw** northern region of England decreed by King Alfred and the Danes to be a legitimate Norse settlement under Norse, not English, law

### Did You Know...?



#### Why Was Alfred So Great?

Alfred was the king of Wessex from 871 to 899. He is best known for his defense of the Anglo-Saxon kingdoms in the south of England against the Vikings, but he was also the only English monarch to be dubbed 'the Great' for his promotion of education and of the English language, which many believe helped unite all of England. King Alfred encouraged his subjects to learn to read English and had many books from Latin and French translated into English. He even learned Latin and translated some important works into English himself, including *The Consolation of Philosophy* by Boethius. It is also thought that King Alfred ordered the important *Anglo-Saxon Chronicle*, which was begun about 890 and maintained by generations of anonymous scribes until the middle of the twelfth century.

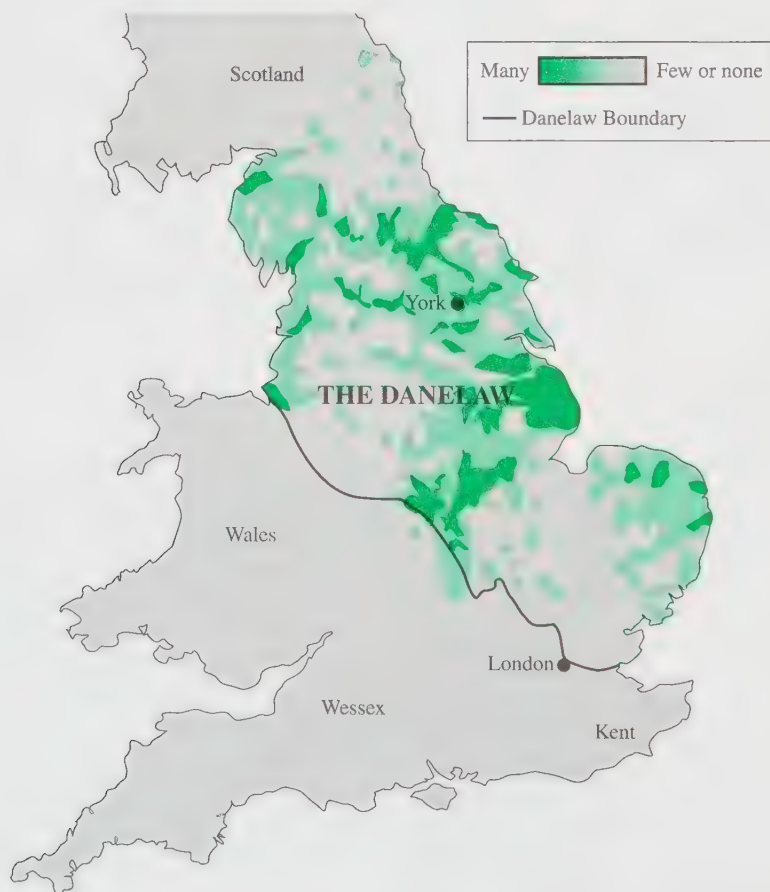


sure what led to the borrowing of these pronouns. Also notable is the borrowing of the auxiliary verb form *are*, another type of word rarely borrowed. And notice all of the words that begin with [sk]: *scant*, *scare*, *scrap*, *scrape*, *skill*, *skin*, *skirt*, *sky*. We know that these are all of Norse origin because this sound combination [s] + [k] existed in early Old English but had changed to the [ʃ] sound: *shin*, *shirt*. In fact, *shirt* and *skirt* derive from the same Proto-Germanic word: *\*skurtijon* ‘a short garment’, which then became *scyrte* (and later *shirt*) in Old English and *skyrta* in Old Norse (and later English *skirt*). Though the number of words borrowed from Old Norse is small compared to the number that English would later borrow from French and Latin, these borrowed words are very much a part of everyday English speech.

The Danelaw (Figure 11.2) part of England is still filled with place-names of Scandinavian origin. And many Old Norse suffixes have become

**Figure 11.2** Places with Names of Scandinavian Origin

The Danelaw is an area of northeast England, where the Danes (or Vikings) were allowed to settle in the later ninth century.



## Did You Know...?

Runic Writing and the *Futhorc*

Some Old English words have odd-looking letters that are no longer part of our writing system. These letters, some of which were incorporated into Old English writing in the Latin alphabet, are *runes*, from the runic alphabet, or *Futhorc*, a Scandinavian writing system named for its first six letters: *feoh* ('movable property'), *ūr* ('bison'), *þorn* ('thorn'), *ōs* ('god'), *rād* ('road'), *cēn* ('pine' or 'torch'). These first six letters correspond to the following runes:

ƿ ƿ ƿ ƿ ƿ ƿ

Runes have the shape they do because they were usually carved into wood or stone. Each runic letter (except two, *eolh* and *Ing*) corresponds to a noun and represents the sound at the beginning of that noun.

part of place-names throughout the English-speaking world. The suffix *-wick* or *-wich* likely came from the Scandinavian *-vik*, meaning 'creek' or 'bay' (and gives us *Keswick*, *Greenwich*, and the word *Viking*). The most common Scandinavian suffix in the Danelaw was *-by* (*Grimsby*, *Whitby*, *Derby*), which originally meant a farmstead; *-thorpe* (*Bishopsthorpe*) meant 'a smaller settlement', a sort of suburb of a village; *-holme* or *-holm* (*Holmhill*, *Reed's Holme*) indicated land reclaimed from marshland and is often associated with island names; *-kirk* meant 'church' and occurs as both a prefix and suffix in place-names (*Kirkbridge*, *Ormskirk*); and the suffix *-thwaite* (*Bassenthwaite*) originally meant 'a smaller farmstead on a larger farm'.

Though Old English vocabulary includes borrowings from other languages through language contact, the vocabulary of the language was still overwhelmingly Germanic. It has been estimated, though, that about 85 percent of the 30,000 Anglo-Saxon words died out after contact with the Scandinavians and the French, which means that only about 4,500 Old English words survived. However, among those surviving words are some of the most common and basic words in English: *and*, *at*, *brother*, *but*, *child*, *drink*, *eat*, *fight*, *for*, *house*, *in*, *on*, *live*, *love*, *man*, *sister*, *sleep*, *to*, and *wife*, for example. In fact, the one hundred most common words in contemporary English are words of Old English origin.

## Old English Morphology

Someone who studies Old English today has to learn it as a foreign language. What makes the study of Old English grammar even more challenging is that there are no longer any native speakers around, and all we have to study are

surviving texts. Nevertheless, we still know quite a bit about the language, and we'll talk about some of the major morphological, syntactic, and phonological differences between Old English and Present-Day English.

Strong and Weak Nouns

Old English is a case-marking language, indicating nominative, accusative (marking direct objects), genitive (marking possessives), dative (marking indirect objects), and (some) instrumental cases on its nouns. Nouns were also classified as **strong** or **weak**, and each noun had grammatical gender: masculine, feminine, or neuter. The following table shows the inflectional morphology of the strong neuter noun *scip* 'ship'. (You may want to go back to the discussion of inflectional morphology in Chapter 5 to review case and grammatical gender.)

**strong and weak nouns** classification of Old English nouns depending on how they are inflected to show case, gender, and number

	Singular	Plural
<b>nominative</b>	scip	scipu
<b>accusative</b>	scip	scipu
<b>genitive</b>	scipes	scipa
<b>dative</b>	scipe	scipum

Weak nouns had another pattern altogether. Here is the declension of the masculine noun 'name':

	Singular	Plural
<b>nominative</b>	nama	naman
<b>accusative</b>	naman	naman
<b>genitive</b>	naman	namena
<b>dative</b>	naman	namum

Strong and Weak Adjectives

Like nouns, adjectives in Old English were also **strong** or **weak**, but this relationship shows up in a different way than it does on nouns. Adjectives in Old English express gender, case, and number and must agree with the noun they modify in these features. An adjective that is not preceded by a determiner is "strong," and one that is preceded by a determiner is "weak." This distinction exists in many Germanic languages today.

For example, the adjective *good* must agree with the noun *ship*, a neuter, nominative, singular noun. When preceded by the demonstrative *þæt* ('that'), the adjective is in its weak form, *gōode*; when not preceded by an article or demonstrative, the adjective is in its strong form, *gōd*.

*þæt gōde scip* 'that good ship' (*gōde* is weak)  
*gōd scip* 'a good ship' (*gōd* is strong)

**strong and weak adjectives** in Old English, the differential expression of case, number, and gender of adjectives, according to whether or not they are preceded by a determiner (weak adjectives are preceded by a determiner, and strong ones are not)

## Strong and Weak Verbs and a Two-Tense System

Verbs had more inflectional information in Old English. Here are the various forms for the verb meaning ‘love’, which had four distinct endings for the present tense, depending on what the subject was (notice the **runes!**):

**runes** Norse alphabet of figures carved into wood or stone; each runic letter corresponds to a noun and represents its initial sound

ic lufie	‘I love’
þu lufast	‘you love’
heo lufað	‘he/she loves’
we lufiaþ	‘we love’
ge lufiaþ	‘you love’
hie lufiaþ	‘they love’

Old English had a two-tense system typical of Germanic languages. Verbs were inflected for past and present tense but not for future (future tense was expressed with adverbs and/or with verbs in the present tense: *I go tomorrow*, for example). Old English had no progressive form of the verb (no verbs ending in *-ing* in combination with *be*, as in *I am going*) and no complex tenses expressed as they are today, as in *I will have left* or *I had been eating*.

When we look at the past tense of Old English verbs, we see that they express a feature common among Germanic languages, a *dental preterite*, or past-tense form of the verb that ends with a dental consonant /d/ or /t/ (still seen today with our *-ed* past-tense ending; remember, it is pronounced as both /d/ and /t/).

fremede	‘did’
bærende	‘burned’
lōcode	‘looked’

Not all verbs in Old English had dental preterites, though as the language developed this feature became more and more common. Contrast these past-tense verbs with those above:

clēaf	‘cleave’
wæs	‘was’

**strong and weak verbs** in Old English, the differential expression of inflection through a vowel change (strong verbs) or through a regular affix (weak verbs)

Old English verbs could also be **strong** or **weak**; again, this strong/weak distinction is a bit different from that described for nouns and adjectives. A strong verb is one in which tense is expressed by an internal vowel change, and a weak verb is one in which tense is expressed by a regular affix. So, Old English *love* is weak, but Old English *singan* ‘to sing’ is strong: *singþ*, *sang*, *gesungen* (‘sing’, ‘sang’, ‘sung’). This strong/weak distinction exists in verbs in Present-Day English as well, as we can see by the translation of *sing*, and also by such verbs as *drink/drank/drunken* and *ring/rang/rung*.



Recall from Chapter 6 that languages can be synthetic or analytic. Synthetic languages encode inflectional information in affixes that include more than one grammatical feature (so, for example, an affix that expresses case, number, and gender). Inflection expressed through vowel changes is also a feature of synthetic languages. Analytic languages, on the other hand, express inflection through regular affixes, through word order, and/or through separate words that express grammatical information. The suffix *-ed* in Present-Day English is an analytic affix. Old English is therefore largely synthetic, having affixes that express more than one grammatical feature (case, number, and gender, for example) and also using vowel changes to express inflection.

## Old English Syntax

Old English was more synthetic than Present-Day English. This difference is responsible in part for the fact that Old English had somewhat freer word order than Present-Day English does because grammatical information is expressed morphologically rather than syntactically.

## Old English Word Order

In Old English, the sentence meaning *The cat chased the rat* could also have the order *The rat chased the cat*, where *the cat* is still understood as the subject (the one doing the chasing), and *the rat* as the object (the one being chased). This is because in Old English *the cat* would have nominative case, telling us that it is the subject (no matter where it is in the sentence), and *the rat* would have accusative case and be marked as the object regardless of its position. In Present-Day English, we depend on word order to interpret subject/object relationships, and so the only possible order for this sentence is *The cat chased the rat*.

The following examples of Old English sentences illustrate some of the possible word orders in which the subject (S), verb (V), and object (O) could occur: SVO, OVS, and SOV.

### S V O

[He] hæfde þa oþ he [ofslog] [þone aldorman].

S V O  
'He had it until he killed the elderman.'

### O V S

[þa stowe] [habbaþ giet] [his ierfenuman]

O V S  
that place have still his successors  
'his successors still have that place'

In dependent clauses, word order was typically SOV, as it is in many modern Germanic languages.

### SOV

þæt [hie] [þone Godes mann] [abitan scolden]

S

O

V

that they the God's man devour should

'in order that they should devour the man of God'

## Interrogative and Negative Sentences

In Old English, the auxiliary *do* was not used in negative or interrogative sentences as it is today. In negative sentences, *ne* was simply inserted before the verb, and interrogatives were formed by inverting the subject and the verb. (Notice also the example of multiple negation *nān . . . ne*, also common in Old English.) Forming negatives in this way, by adding separate words, is one of the ways in which Old English was an analytic language.

Hē cwæþ þæt nān man ne būde be norðan him.

He said that no man not lived north of him.

'He said that no one lived north of him.'

Hwilce fixas gefēhst þu?

Which fishes catch you?

'Which fishes did you catch?'

Hæfst ðu hafocas?

Have you hawks

'Do you have any hawks?'

## Old English Phonetics and Phonology

Even though there is no record of what Old English sounded like, scholars have come up with reasonable hypotheses about the phonology of the language based on spellings, puns, rhymes, pronunciations in related languages, and knowledge of how language sounds typically change. Old English had much the same consonant system as Present-Day English, though /r/ was trilled, and consonants that we don't pronounce today were pronounced in Old English. So the initial consonants in *cnāwan* and *cnafa* ('know' and 'knave') and *gnæt* and *gnagan* ('gnat' and 'gnaw') were pronounced in Old English. And remember the Great Vowel Shift from Chapter 3? Old English was spoken long before this shift occurred, so words were pronounced quite differently because of their different vowel sounds. Recall that an Old English speaker would say [hu:s] for *house* and [fo:d] for *food*. These examples also illustrate that vowel length (marked with :) was distinctive in Old English; that is, it could make a difference in meaning. And because of vowel mutation (a different process, which occurred during the

## hwæt!

The several surviving manuscripts of the *Anglo-Saxon Chronicle*, most written in Old English with some in Middle English, are a rich source of historic and linguistic information.

time Old English was spoken), the plural of *mūs* ('mouse'), *mūsiz* ('mouses') became *mys*. After the Great Vowel Shift, *mys* is pronounced as in Present-Day English, [mays]. (Vowel mutation, or *ablaut*, is also the process that gives us *foot/feet* and *goose/geese*, among other pairs.) Also, final vowels were pronounced and occurred in many words that no longer have them, such as *sōna* 'son' and *nama* 'name'.

The following text excerpt from *The Battle of Maldon* (<http://faculty.uca.edu/jona/texts/maldon.htm>) illustrates the "otherness" of Old English compared to Present-Day English. How many words look familiar to you? Study the text to find examples of the grammatical aspects of OE we've discussed.

Hige sceal þe heardra,  
heorte þe cenre,  
mod sceal þe mare,  
þe ure mægen lytlað.  
Her lið ure ealdor  
eall forheawen,  
god on greote.  
A mæg gnornian  
se ðe nu fram þis wigplegan  
wendan þenceð.  
Ic eom frod feores;  
fram ic ne wille,  
ac ic me be healfe  
minum hlaforde,  
be swa leofan men,  
licgan þence.

Thought must be the harder,  
heart be the keener,  
mind must be the greater,  
while our strength lessens.  
Here lies our prince  
all hewn,  
good one on grit.  
He may always mourn  
who from this war-play  
thinks now to turn.  
My life is old:  
I will not away;  
but I myself  
beside my lord,  
by so loved a man,  
think to lie.

Source: Bodleian MS Rawlinson B 203. Oxford.

Translation copyright © 1982, Jonathan A. Glenn.

Did you notice the negative marking: *ne wille* where the negation precedes the modal verb? Also, the adjective *god* in "god on greote" is a strong adjective, and the word order in the line *Her lið ure ealdor* has the verb *lið* 'lies' preceding the subject *ure ealdor* 'our elder (prince)'. Some words are clearly cognates: *men*, *heort*; can you find others? Notice the prefix *for-* in *forheawen*.

Now let's consider the phonology of this Old English text. Listen to the audio of the passage at the following link (3: "Birhtwold's Speech" from *The Battle of Maldon*, anonymous, date unknown): <http://www.wwnorton.com/college/english/nael/noa/audio.htm>.

As you listen, note the following: <sc> is pronounced /š/, as in *sceal*; <g> is pronounced when it precedes a consonant, as in *gnornian*, as is <h> before another consonant, as in *hlaforde*; <c> is pronounced /k/;

the <f> coming between two voiced sounds becomes voiced /v/, though there was not yet a phoneme /v/, as in *leofum*.

In Old English, words were stressed on the first syllable, as in other Germanic languages, unless that syllable was a prefix. In that case, stress migrated to the following syllable. For example, *feores* is stressed on the first syllable: *féores*, while the verb *forheawen*, which begins with the prefix *for-*, is stressed on the second syllable: *forhéawen*. We still find vestiges of Old English stress in Present-Day English, particularly in words with Germanic prefixes such as *be-*, *for-*, *forth-*, *after-*, and *under-*, as in *becóme*, *forfét*, or *forthcóming*.

RPE 11.4

## English Meets French: Middle English

In 1066, the Normans, from the northern part of France, invaded and conquered England at the Battle of Hastings, on the southeastern coast of England. With the French-speaking rulers in power, French gradually became the language of the land until around the second half of the fourteenth century, but English would remain entrenched as the language of the common people. The variety of English spoken from around 1100 to around 1500 is called Middle English.

A series of events led to the rise and fall of French in England and to the eventual establishment of English as the national language. A short time after William the Conqueror (and Duke of Normandy) vanquished the Anglo-Saxon king, Harold Godwinson, at Hastings, Anglo-Saxon nobles were replaced with Norman ones, and England came fully under William's rule. The language of the court became French. William also brought with him a feudal system, creating a social division between the French nobility and the English-speaking peasants. Though English was greatly affected over time by contact with French, it remained the language of the English peasants, who had very little contact with courtly life conducted in French.

Another reason that French did not become the language of England was that in 1204 King John of England finally lost all of England's Norman lands to the French (and to Philip II, the French king). This effectively broke the political ties between France and England, and the Norman nobles in England, known as Anglo-Normans, had to choose between staying in England and giving up their French lands, or going back to France. Most Anglo-Normans chose to stay in England, and interest in and connections to France waned. The variety of French that the Anglo-Normans spoke wasn't well accepted among continental French speakers either, which further isolated the two countries and cultures from each other. School came to be taught in English, and over time English became the language of the court. The off-and-on battle for power between France and England (1337–1453) known as the Hundred Years' War resulted in further separation between the two countries and their languages.



**Black Death**

bubonic plague, carried by rodents (and their fleas), which wiped out two-thirds of the population of Europe in the fourteenth century

Another blow dealt to French was the **Black Death** (bubonic plague), which struck around 1348; by 1351, it had killed approximately two-thirds of Europe's population and about one-third of England's. As you can imagine, one effect of the plague was a massive labor shortage, and English-speaking peasants moved to the towns, working for higher pay for French merchants and guildsmen and sometimes moving into positions of economic power themselves. This helped break down the social division between French speakers and English speakers, and English gained in prestige.

**Did You Know...?****The Black Death, Rats, and Fleas**

We know now that the Black Death (so called because of the black spots it caused to appear on the skin), or bubonic plague, is carried by rats and mice and that humans became infected with the disease when bitten by fleas from rodent carriers. Because rat infestation was higher in urban areas than in rural areas, medieval towns and cities were hit harder by the disease, causing economic havoc. The disease struck with great speed; in the words of Boccaccio, the great Italian writer of the time, victims "ate lunch with their friends and dinner with their ancestors in paradise" (Boccaccio 1351: Day 1).

By all accounts, everyone in England spoke English by the end of the fourteenth century, even the Norse speakers north of the Danelaw. As you might imagine, there were great dialectal differences across the country, and the English spoken in London, the seat of economic and political power and a major seaport, became the standard dialect. Until the late Middle Ages, there had been no real standard version of English; scribes producing books wrote in whatever dialect they spoke, spelling words sometimes radically differently. When William Caxton brought the printing press to London in 1476 and printed the first books in English, he not only revolutionized bookmaking but set in motion the process of standardizing spelling (to avoid resetting type for different spellings). (We will discuss spelling the language in more detail in Chapter 13.)

**Middle English Vocabulary**

Though Old English looks unfamiliar to speakers of Present-Day English, it's easy to tell that Middle English is English, and we can even understand a lot of it when we read it or hear it. Perhaps the most obvious change in the language after the Norman Conquest was in vocabulary; English borrowed thousands of French words, many of which we still use today. French was the

language of government, so it's not surprising that many words having to do with government and administration are from French: *administer*, *attorney*, *chancellor*, *country*, *court*, *crime*, *judge*, *jury*, *noble*, *royal*, and *state*, to name just a few. And French, along with Latin, was used in the Church, so many of those words are of French origin: *clergy*, *preach*, and *sacrament*. And also from French are words having to do with food and cooking, or *cuisine*: *beef*, *mutton*, *pork*, and *veal*. Compare the Old English words for these same foods: *cow*, *sheep*, *pig*, and *calf*. Because languages generally avoid exact synonyms, these words came to have different meanings from the French borrowings. And because the French-speaking people were, for the most part, being served by the English, the creature in the field (the English word) and the item on the table (the French word) came to have these different meanings. We also see this distinction in status in words borrowed from French, such as *tax*, *estate*, *pay*, *religion*, *savior*, and *pray* and the culinary terms *roast*, *serve*, and *dine*.

Fashion terms were introduced (including the word *fashion* itself)—among them *dress*, *coat*, *pantaloons*, *bonnet*, *boots*, *satin*, *ribbon*, *pleat*, *pearl*, and *bracelet*. Terms for sports, art, education, medicine, government, and law were borrowed from French during this period: *tournament*, *park*, *dance*, *chess*, *tennis*, *amusement*, *art*, *portrait*, *color*, *music*, *romance*, *tragedy*, *ball*, *study*, *pupil*, *copy*, *pen*, *pencil*, *paper*, *grammar*, *noun*, *subject*, *surgeon*, *pain*, *remedy*, *cure*, *plague*, *poison*, *government*, *rule*, *reign*, *public*, *crown*, *tax*, *citizen*, *appeal*, *accuse*, *pardon*, *prison*, *innocent*. Many Middle English words were also borrowed from Scandinavian languages: *anger*, *bag*, *cake*, *call*, *hit*, *husband*, *kid*, *race*, *rag*, *down*, *flag*, and *freckle*, among many others.

## Middle English Morphology

The biggest morphological change from Old English to Middle English is that many inflectional affixes disappeared (remember that Present-Day English has only eight inflectional affixes, but in Old English, nouns, adjectives, and verbs were much more highly inflected). For example, the *-an* and *-um* endings on the Old English nouns in the tables shown earlier (for *scip* and *nama*) were reduced to /ə/. Infinitival verbs in Old English, such as *drivan* 'drive', lost the final syllable and thus the infinitival inflectional affix, becoming *drive* in Middle English (where the final <e> was pronounced for a while, then finally dropped as well). Similar loss of inflectional affixes occurred on adjectives, which lost most of their case, number, and gender inflections and, with that, the loss of distinction between weak and strong forms.

## Loss of Inflection

Scholars do not agree on what motivated the loss of inflectional endings during the Middle English period, especially the loss of case-marking, though it is not thought that the influence of French directly produced the changes. One explanation is that speakers were exposed to and confused

(unconsciously) by the combination of English, Old Norse, and French and so abandoned all the endings. However, the loss of inflectional markings was already occurring before the Norman Conquest. Also, Scandinavian influence was felt only in certain parts of the country, though the loss of inflectional endings seems to have happened across the board. Another more likely explanation is that the phonological reduction of unstressed final vowels to /ə/ meant that many distinctions were no longer heard. Another factor was that the language already had a generalized word order, so information could be used to indicate grammatical function instead of inflectional morphemes, making the inflections redundant.

## Middle English Syntax

With the loss of inflection came more fixed word order and increased use of words such as auxiliary verbs rather than inflections to convey grammatical information.

### Fixed SVO Order

Word order, as you recall, was fairly flexible in Old English, but in Middle English the typical order in main clauses came to be SVO. Both SVO and SOV orders appeared in dependent clauses, where in Old English the order was typically SOV, but SVO had become the more common pattern by this time.

Thyn Astolabie hath a ring to putten on the thombe

S                      V                      O

‘Your astrolabe has a ring to put on the thumb’

This change appears to be a result of the loss of inflection because grammatical relations were no longer clearly expressed morphologically. Instead, syntactic position became more important and the means by which relationships such as subject and object were conveyed.

### Middle English Auxiliary and Modal Verbs

The loss of inflection also resulted in words rather than affixes being used to convey grammatical information. In Middle English, perfect aspect (expressed with the auxiliary *have*) began to show up (remember that this didn’t exist in Old English).

þou *hauset don* oure kunne wo

‘You have done our family woe’

In Middle English, we see an increased use of modal verbs, again to reflect meanings that were previously indicated with inflections:

þat y *mowe* riche be

‘that I may rich be’

The modal verbs with *shall* and *will* began to be used to express future tense (whereas in Old English the present tense was used to express the future, using adverbs and other words to provide the right context).

And swiche *wolle* have the kingdom of helle, and not of hevene  
 ‘And such will have the kingdom of hell, and not of heaven’

## Interrogative and Negative Sentences

Also in contrast to Old English, in Middle English we see a great rise in the use of auxiliary *do*, and for the first time it appears in negative and interrogative sentences:

My maister dyd not graunt it.  
 Fader, why do ye wepe?

And as in Old English, multiple negation existed in Middle English, as you can see in the following sentence from the great Middle English author Geoffrey Chaucer’s *The Canterbury Tales*, “The General Prologue” (Hallissy 1995: 24):

He *never* yet *no* vileynye *ne* sayde  
 ‘He never yet no villainy not said’

## Middle English Phonology

Phonology continued to change, but not too much, during the Middle English period; most of the consonants and vowels of Old English were maintained in Middle English. Remember, though, that vowels were to undergo a huge shift (the Great Vowel Shift) at the end of the Middle English period, so Middle English vowels were pronounced very differently from how we pronounce them today. Also during this period, /w/ was lost before /o/, so *swa* became *so*; and /h/ was lost before other consonants, so *hring* became *ring*, and *hlaford* became *lord*. Old English *acsian* ‘ask’ became *asken* in Middle English (so in modern dialects of English, *aks* rather than *ask* is actually closer to the original pronunciation), an example of metathesis that you learned about in Chapter 3, and the Old English prefix *ge-* became /ɪ/, so *genōg* became *inough* ‘enough’. Certain vowels lengthened unless followed by another syllable, which is where we get the vowel distinction in pairs like *children* and *child*. And as we mentioned in the discussion of morphology, final unstressed vowels were lost, which led to Old English *heorte* being pronounced in Early Middle English as *herte* and in later Middle English as *hert* (‘heart’). Old English *sōna* was pronounced *sōne* in early Middle English and in late Middle English *son* ‘son’.

Stress in Middle English began to diverge from the Old English (predictable) pattern. Though English word stock maintained its Germanic stress patterns (patterns that are with us today), the influx of French vocabulary—in which stress fell, typically, on the final syllable



(*medicine*)—brought with it a shift in stress patterns that depends on the arrangement of stressed and unstressed syllables in a word. So, though we stress *grammar* on the first syllable, stress migrates depending on the number of syllables:

grámmar      grammátical      grammaticálicity

Here is another excerpt (lines 43–55) from Chaucer’s “General Prologue” to *The Canterbury Tales*. Can you pick out some of the French vocabulary, as well as some of the grammatical properties of Middle English we talked about earlier?

A knyght ther was, and that a worthy man,  
That fro the tyme that he first bigan  
To riden out, he loved chivalrie,  
Trouthe and honour, fredom and curteisie.  
Ful worthy was he in his lordes werre,  
And therto hadde he riden, no man ferre,  
As wel in cristendom as in hethenesse,  
And evere honoured for his worthynesse.  
At Alisaundre he was, whan it was wonne.  
Ful ofte tyme he hadde the bord bigonne  
Aboven alle nacions in Pruce;  
In Lettow hadde he reysed, and in Ruce,  
No Cristen man so ofte of his degree.

#### RPE 11.5

### From Synthetic to Analytic

Many of the changes we’ve discussed chronicle the way that English gradually developed from a synthetic to a more analytic language. In Middle English, we see the loss of inflection and a subsequent dependence on SVO word order to express grammatical relationships. We see the rise of the auxiliary elements *have* and *be* and the modals *shall* and *will* to construct complex tenses (perfect, progressive, and future) and an increased use of auxiliary *do* to form interrogative and negative sentences. In Old English, word order was much freer because grammatical relationships were expressed morphologically instead (on strong and weak nouns, adjectives, and verbs).

#### RPE 11.6

## English Established

The next phase in the development of English is Early Modern English, spoken from about 1500 to about 1800 (remember that these dates are not intended to suggest that the language changed from one version to another overnight). Early Modern English is quite recognizable to contemporary

LINGUISTICS  
IN THE NEWS

## Languages and Land Bridges

**E**vidence from bones, tools, and DNA shows that our North American continent was settled by people from northern Asia over 10,000 years ago. The DNA comes from recently discovered human feces that date back 14,300 years. DNA analysis reveals that people who lived in caves in Oregon were closely related to modern Native Americans and to people across the Bering Strait in Siberia and eastern Asia.

A link between the languages of northern Asia and those of North America had been suspected for some time since the similarities in words had been noticed. However, such similarities can occur by borrowing or by chance, so establishing definite family relationships must go beyond word resemblances.

Edward Vajda, a professor of linguistics at Western Washington University in Bellingham, recently demonstrated a convincing kinship between a Siberian language family called Yeniseic and a Native North American language called Na-Dene. The Na-Dene family includes the many Athabaskan languages, including languages of Alaska, Canada, the Pacific Northwest, and Navajo in the Southwest, as well as the Tlingit language. Vajda presented a paper at the University of Alaska

in Fairbanks and convinced fellow linguists, who work on many of the languages on both sides of the Bering Sea, of a shared ancestor. Vajda's clinching evidence came from his work of more than fifteen years on Ket, an endangered language spoken in central Siberia. Vajda says that features of the Ket verb reminded him of Navajo, so he got down to serious comparison. He determined that verbs in Ket, in its Yeniseic family, and in the Na-Dene family all contain a complex series of prefixes, and he showed that the form, order, and meanings of these prefixes were very much the same in both families. Vajda also established relationships in the sound systems of the two language families, as well as a great many cognates in the various languages.

The comparisons were made possible by the work of linguists at the University of Alaska, Fairbanks: Jeff Leer's analysis of Tlingit; Michael Krauss's work on the extinct language Eyak and on comparisons of various Athabaskan languages; and James Kari's work on Athabaskan words and verb structure. Working independently, Vajda and the Alaska linguists have discovered too many parallels to be explained by anything other than a common ancestor.

The distance from the Yeniseian range to the most distant Athabaskan languages in the southwestern United States is the greatest overland distance covered by any known language spread not using wheeled transport or sails.

*For more information*  
Doughton, S. 2008. Fossilized feces found in Oregon suggest earliest human presence in North America. *Seattle Times*. April 3. [http://seattletimes.nwsources.com/html/localnews/2004324975\\_weboldpoop04m.html](http://seattletimes.nwsources.com/html/localnews/2004324975_weboldpoop04m.html)

Kari, J. 2008. Notes from the Dene-Yeniseic Symposium, February 26–27. University of Alaska, Fairbanks. <http://www.uaf.edu/anlc/docs/Kari-DY-intro-3.pdf>

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Solis, M. 2008. Tongue ties: A language bridge across the Bering Strait. *Crosscut.com: News of the Great Nearby*. <http://www.crosscut.com/tribes/13846/>. (30 April 2008).

Vajda, E. 2008. Dene-Yeniseic in past and future perspective. <http://www.uaf.edu/anlc/dy2008.html>

English speakers, mostly because we are familiar with it from literature, and of course because it isn't as "old" as Old or Middle English. Shakespeare's writing is in Early Modern English, as is the King James version of the Bible. There are, however, quite a few differences in phonology, morphology, and syntax, compared to any contemporary dialect of English.

Remember that right at the end of the Middle Ages the printing press had been introduced to England; however, most people were still illiterate. Mass production of books and pamphlets did mean that literacy gradually was becoming more widespread. The spread of books in English had several consequences. One is that English became even more entrenched as the national language of Britain; it was now a literary language (in addition to French and Latin) as well as being the most widely spoken one. Another important consequence is that readers now had access to works written in the variety of different dialects of English spoken in Britain, such as *Sir Gawain and the Greene Knight*, written in West Midlands English, as well as Chaucer's works, written in London dialect (East Midlands). Because London dialect appeared in print, other dialects came to be seen as less prestigious because they were not written down anymore. As we saw in the earlier discussion of Caxton and the printing press, the London dialect became the standard dialect of England and is the foundation of other standard varieties of the language in the United States, Canada, Australia, New Zealand, South Africa, and India.

Despite becoming the language of Britain, English still had some challenges to its popularity. During the Renaissance, there was a revival of interest in classical learning. Many works by Caesar, Virgil, Homer, and others were translated into English, though scholars also experimented with English and were sometimes defensive and even apologetic about using the language in their work. English was still viewed as inferior to the classical languages, and some writers—among them Elyot, Spenser, Thomas More, Sidney, Shakespeare, and Jonson—tried to "improve" English by introducing new words and defending the English language and its literature quite directly. The substantial body of poetry and prose that was being written at this time was beginning to put people at ease that English was a "worthy" language.

One major event in the history of English was the separation of the English Church from Rome in 1536, when Henry VIII broke with the Catholic Church. This event led to a rise in status of English as the language of religion and learning (the position previously held by Latin). The Anglican Protestants believed that everyone should have access to the Bible in English, and many people began to learn to read English so they could read the Bible in their own language.

**RPE 11.7**

## The Birth of "Correct" English and Prescriptive Grammar

The increased literacy and the increasing number of printed texts in English gradually led to an increased standardization of the language, which in turn gradually led to the idea of correctness in language. People began to

want dictionaries to help them read, write, and spell in the same manner, and some became intent on fixing the language in what they viewed as a polished, perfect, and permanent form. Scholars attempted to reduce the language to a finite set of teachable and learnable rules and to set up a standard correct usage, but there were no dictionaries and no real authoritative governing bodies on language (such as a language academy) to “fix” the language. John Dryden wrote in 1660 that “we have yet no prosodia, not so much as a tolerable dictionary, or a grammar, so that our language is in a manner barbarous” (Stackhouse 1731: 187).

Some half-hearted attempts were made to set up a language academy that would codify how the language should be used and spoken, but no academy ever really got off the ground (the Académie Française, in contrast, is alive and well in France but not very powerful). There was agreement, however, that a good dictionary of English was needed. Samuel Johnson’s *Dictionary of the English Language*, published in 1755, revolutionized reference books and all English dictionaries that followed. Although a great improvement over anything they had, it was inadequate by modern standards, with only 50,000 entries (compared to two to three times that many in most dictionaries today), few pronunciations, and quite a few incorrect etymologies.

RPE 11.8

### Did You Know...?



#### The Word According to Johnson

Can you tell what these definitions from Johnson’s dictionary define?

- grain, which in England is generally given to horses but in Scotland supports the people (*oats*)
- an allowance made without equivalent, which in England “is generally understood to mean pay given to a state hireling for treason to his country” (*pension*)
- female cant (*gossip*)
- hateful tax levied upon commodities, and adjudged not by the common judges of property, but wretches hired by those to whom excise is paid (*excise*)
- a convulsion of the lungs, vellicated by some sharp serosity. And this word is pronounced *coff*. (*cough*)

Though some of Johnson’s definitions are funny, politically biased, or sexist, his work also set high standards for lexicographical research. Johnson continued the emerging practice of using literary quotations to illustrate word meanings, a practice still in use today by the *Oxford English Dictionary*, among others. Some of Johnson’s quotations come from the writings of Shakespeare, Milton, and Dryden, among other literary and political luminaries of the day.



**usage** language that is accepted as standard and that may or may not follow prescriptive rules

This period also sees the rise of grammars of English, breaking the tradition of grammar study based solely on the grammar of Latin. One such grammar of English was Joseph Priestley's *The Rudiments of English Grammar*, published in 1761 (with a second edition in 1768). Priestley defined grammatical rules in terms of **usage**, or how people use language, rather than in terms of *prescription*, how they “should” use language. He wrote, “The general prevailing custom where ever it happen to be, can be the only standard for the time it prevails.” This is a quite progressive attitude about language change and language standards for the time, and Priestley is often hailed as being unique in his descriptive, rather than prescriptive, approach to grammar.

And here's another early quotation on usage from Scottish rhetorician George Campbell (1776):

Language is purely a species of fashion . . . It is not the business of grammar, as some critics seem preposterously to imagine, to give law the fashions which regulate our speech. On the contrary, from its conformity to these, and from that alone, it derives all its authority and value. For, what is the grammar of any language? Good usage is national and reputable and present.

Because Latin was for so long the language of religion and education in England, it was seen as more prestigious than English, and some even went so far as to suggest that English grammar should conform to the grammar of Latin, even though the two languages are grammatically quite different (and from two different language families, Romance and Germanic). Priestley responded to such attempts, remarking, “We have no more business with a future tense in our language, than we have with the whole system of Latin moods and tense; because we have no modification to our verbs to correspond to it . . .” (Priestley 1761, cited in Beal 2004: 110)

Another well-known English grammarian of the time, Bishop Robert Lowth, is often portrayed as a staunch prescriptivist, guilty of imposing the rules of Latin grammar on English. Lowth was author of the very popular *A Short Introduction to English Grammar*, of which at least twenty-two editions appeared during the eighteenth century. He is often cited as the source of such prescriptive rules as “Never end a sentence with a preposition” (*Who did you talk to?*) and “Never split an infinitive” (*She wants to quickly run into the store.*), based on the fact that in Latin both constructions are impossible. It turns out, however, that both of these rules can be traced to sources other than Lowth, and that while some of Lowth's rules were certainly prescriptive, others were based on usage, much like Priestley's. Lowth makes the point, for example, that “stranding” prepositions is informal but not necessarily to be condemned (Beal 2004: 111).

Regardless of these grammarians' dependence on usage or on prescription, the Early Modern period sees the rise of the notion of correct versus

incorrect English and the clear perception that certain ways of talking are more prestigious than others. Typically, the speech that is highly valued is that of speakers who have higher social status. For example, J. Greenwood, author of *An Essay Towards a Practical English Grammar* (1711), claimed that the double negative construction (*I don't know nobody*) should be avoided (p. 160), a stance that Lowth adopts in his second edition. It's probably not accidental that by this time, speakers of double negative dialects were stigmatized as lower class.

## Early Modern English Grammar

As we mentioned previously, although we can easily read and understand Early Modern English, it nevertheless differs in several ways from Present-Day English. Phonologically, Early Modern English is close to Present-Day English because it was spoken after the Great Vowel Shift (discussed in Chapter 3). During this period, all the remaining final schwas that were still pronounced in Middle English words were dropped; for example, the words *trouthe* and *hadde*, with final <e> pronounced, became *truth* and *had*. In this period, the consonant /l/ was lost after low back vowels and before labial or velar consonants, so speakers pronounced *half*, *palm*, *folk*, and *talk* without /l/, but *film*, *silk*, and *hulk* with /l/. By this period, too, the initial /g/ and /k/ that were pronounced in Old English become silent, so *gnaw* and *knee* were pronounced as we pronounce them today. And this period is when /r/ drops in certain environments (a process that started in Middle English), leading to “r-less” pronunciations of the <r>s following vowels in words such as *quarter*, *march*, *brother*, *car*, and *farm*.

Morphologically, Early Modern English looks much like English today, though some *-en* plurals still existed (*housen*, *hosen*, *eyen*), and other nouns were not always affixed with *-s*, so we find *a team of horse* but also *a brace of horses*. Comparative adjectives showed up with both a comparative word and an affix, as in *most stillest night*, and the comparative and superlative affixes *-er* and *-est* showed up on adjectives different from those we affix today, as in *violentest* and *certainer*. The language retained some verb inflections in the present tense (*-est*, *-eth*), though not consistently, and the formal *you*/informal *thou* distinction also persisted into this period, though again not consistently.

Syntactically, modals and the auxiliary verb *do* were used as we use them today, although nonemphatic *do*, which we discussed in Chapter 7, still existed until late in this period. Nonemphatic *do*, remember, is pronounced without stress (which makes it different from emphatic *do*, which is stressed, as in *I DID do my homework!*).

Juliet: I have forgot why I did call thee back. (*Romeo and Juliet*)  
That handkerchief did an Egyptian to my mother give. (*Othello*)

In Early Modern English, we find questions formed both by inverting the main verb with the subject and by inserting the pleonastic auxiliary *do* (indicating that *do*-insertion was optional during this stage of the development of English).

Why do you look on me?

Why look you so upon me? (both from *As You Like It*)

Also, as we discussed in Chapter 7, we find negative sentences with negation following the main verb but also negative sentences with auxiliary *do*.

Came he not home tonight? (*Romeo and Juliet*)

I do not sue to stand. (*Richard II*)

In other syntactic developments, SOV order was still around, even though the language was by now predominantly SVO.

As the law should them direct.

S O V

And we find much evidence of English as an analytic language, with phrases such as *be going to* and the modal *will* + main verb to indicate future tense (*will go*).

#### RPE 11.9

## The Early Modern English Vocabulary Explosion

The Renaissance was an age of exploration, and as a result, English became infused with a number of loanwords, not just from other Indo-European languages but for the first time from non-Indo-European languages as well. Below are some examples, which also illustrate the parts of the globe to which English was exported, often through colonization (Millward 2012: 287–288).

*Italian:* adagio, alto, aria, opera, solo, balcony, bandit, ghetto, macaroni, malaria, artichoke, tariff, belladonna, vermicelli

*Amerindian:* moose, hickory, moccasin, papoose, tomahawk, pecan, skunk, terrapin

*German:* cobalt, meerschaum, quartz, zinc, halt, knapsack, noodle, swindle, veneer, waltz

*Celtic:* banshee, brogue, galore, cairn, plaid, shamrock, trousers

*Russian:* beluga, steppe, mammoth

*Norwegian:* fiord, troll, lemming

*Dutch:* commodore, cruise, deck, reef, scow, sloop, blunderbuss, uproar, sleigh, snuff, drill, yacht

*Turkish:* dervish, divan, jackal, pasha, pilaf, sherbet, turban

*Arabic:* ghoul, harem, hashish, henna, sheik

*Hindi:* bandanna, bungalow, cheetah, dungaree, guru, jungle, seersucker, shampoo, veranda

*African:* chigger, marimba, okra

*Chinese:* ginseng, ketchup, kumquat, pekoe, sampan, tea, typhoon

#### RPE 11.10



## Accent on Philologists

J. R. R. Tolkien was a philologist. His first job, in fact, was as a lexicographer on the *New English Dictionary* (which was the precursor to the *Oxford English Dictionary*). His training in language and his positions, first as a professor of English language at the University of Leeds and later as professor of Anglo-Saxon at Oxford University, gave him the knowledge to create the languages he used in his books. Tolkien (pictured) created the languages spoken by the Elves before even writing his famous *Lord of the Rings* trilogy. The phonology, vocabulary, and grammar of two of the languages, Quenya and Sindarin, were based largely on Finnish and Welsh, two of the languages Tolkien studied.

Philologists are linguists—or at least they used to be. Though today's philologists remain concerned about language, the meaning of the word, and therefore what philologists do, has changed quite a bit over time. For example, the American Philological Association was founded in 1869 by "professors, friends, and patrons of linguistic science"; now, the organization is the "principal learned society in North America for the study of ancient Greek and Roman languages, literatures, and civilizations." Most of its current members are classics teachers, and philology, when it is understood to refer to the study of classics, is sometimes called classical philology. Traditionally, language study in the West meant the study of Greek and Latin, and language study throughout the eighteenth and nineteenth centuries was the study of the historical development of language (diachronic linguistics). When language study shifted in the twentieth century to the study of a language at a particular point in time (synchronic linguistics), the term *philology* came to be contrasted with *linguistics*. The meaning of philology also varies today depending on where you live. In British English, philology still is synonymous with the study of historical linguistics, while in the United States, it means either the study of classics or,



AP Photo

more broadly, the study of a language's grammar, history, and literary tradition.

For philologists, both historically and currently, the study of language and literature are usually intertwined. In addition to classical philologists, those who study other languages and their literatures, such as the medievalists in English departments, can be considered philologists. Medievalists today study the literature of the Middle Ages, but to do so, they must learn the language or languages themselves, so they are usually quite adept at the Old and Middle English languages.

Today if you're a philologist, you can study and teach Greek or Latin, you can study and teach Old English or Middle English language and literature, and you can work in the overlap between the study of language and the study of literature. And, like Tolkien, you could invent your own language!

*For more information*

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## Summary

In this chapter, we've discussed how scholars began to study language and language change in the eighteenth and nineteenth centuries. We have seen that languages are members of language families, with both ancestors and descendants (metaphorically speaking, of course). We've introduced the language family to which English belongs, Indo-European, and the particular branch of the family that English is a member of, Germanic. We've discussed characteristics of Germanic languages and how they are reflected in the developmental stages of English, although English today has lost some of those features. We've traced the history of English from its beginnings in the British Isles to the brink of its expansion across the world during the age of exploration.

As we've seen, the developmental stages of English are Old English, Middle English, and Early Modern English, and each stage has certain phonological, morphological, and syntactic characteristics, as well as unique vocabulary and spelling differences. We've observed the development of English from a synthetic language (Old English) to a more analytic one (Middle English and onward), with fixed word order and the use of regular affixes and separate words to express grammatical relationships.

An integral part of the history of English includes the rise of prescriptive grammar and the notion of grammatical correctness. We've briefly explored prescriptive grammar and the idea of language authority: who decides what is correct, what is not, and why. We've seen that prescriptive rules are often arbitrary and that a more moderate approach to language norms is to base rules on usage, or how language is actually used in the community.

In the next chapter, we investigate the spread of English to other parts of the globe. We will explore contemporary varieties of English and will look at their origins, their characteristics, and where they're spoken and by whom, all around the world.

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## Review, Practice, and Explore

### RPE 11.1 Regular Sound Correspondences

- A. Which of the following languages is/are Indo-European?
- B. On what do you base your answer? Can you identify any regular sound correspondences?
- C. Can you identify the non-Indo-European languages? What language family are they members of?

A key to this exercise appears at the end of this section.

L1	L2	L3	L4	L5
ichi	ekas	jedyn	en	egy
ni	dvau	dwaj	twine	két
san	tryas	tři	thria	három
shi	catvāras	štyri	fiuwar	négy
go	pañca	pječ	fif	öt
rocku	ṣaṣ	šěšć	sehx	hat
shichi	sapta	sedm	sibun	hét
hachi	aṣṭau	wosm	ahto	nyolcz
ku	nava	džewjeć	nigun	kilencz
jū	daṣa	džesać	tehan	tíz
hyaku	ṣatam	sto	hunderod	száz

(Adapted from Algeo and Butcher 2005: 84.)

## RPE 11.2 Non-Indo-European Languages

Choose a non-Indo-European language and research it (you can choose from the list of non-Indo-European languages we provide in the chapter). A good source is the *Ethnologue* website, <http://www.ethnologue.com/>. Write a summary of your research in which you answer the following questions:

- Where is the language spoken, and by how many speakers?
- What language family is the language a member of? What are some related languages? Or is it an isolate, a language with no other existing family members?
- What are two other facts about the language that you find particularly interesting or striking and that you didn't know before (pronunciations, morphology, word order, vocabulary, interesting facts about its origins)?

## RPE 11.3 Major Changes from Indo-European to Germanic

All Germanic languages in their oldest forms share characteristics that distinguish them from other Indo-European languages. These six features unique to Germanic languages are given on pages 375–377.

- Choose a Germanic language (other than English), conduct some research, and then explain and illustrate how it exhibits *two* of these characteristics. Give the characteristic, an example, and a brief explanation.

*Characteristic:* alveolar suffix for the past tense

*Example:* Old English:      ic sēce 'I seek'  
                                      ic sōhte 'I sought'  
                                      ic temme 'I tame'  
                                      ic temede "I tamed"

*Explanation:* In Old English, the past tense verbs *sōhte* and *temede* end in an alveolar sound (/t/ and /d/) in the past tense.

- B. Now, choose a non-Germanic language and show that it *doesn't* exhibit the two characteristics you illustrated in A. For example, verbs in Latin, a Romance language, do not have alveolar suffixes in the past tense.

*Example:* Latin: sagiō ‘I perceive’  
sāgivi ‘I perceived’  
domō ‘I tame’  
domui ‘I tamed’

*Explanation:* The Latin verbs *sāgivi* and *domui* do not have alveolar suffixes in the past tense.

RPE 11.4 Old English Grammar

Discuss differences in vocabulary and syntax that you can identify in the following Old English sentences. What are some of the different word orders that you can identify? What prefixes or suffixes, if any, do you find? What words look familiar to you? Which are completely unfamiliar, and what do they mean? What differences in spelling do you find?

- a. þa geseah ic beforan unc onginnan ðeostrainða stowe.  
'then saw I before us begin to darken that place'
- b. Her is seo bot, hu ðu meaht þine æ ceras betan gif hie nellap wel weaxan.  
'here is the remedy, how you can your fields restore if they will not well grow'
- c. Ic ahsige eow, forhwi swa geornlice leorni ge?  
'I ask you, why so eagerly study you?'
- d. Hwæt sægst þu, fugelere?  
'what say you, bird-hunter?'
- e. ond þæs oþrew þone mæstan dæl hie geridon ond him to gecirdon buton þæm cyninge Elfrede.  
'and of the rest the greatest part they seized and (to) them submitted except the king Alfred'
- f. Her for se here to Cirenceastre of Cippanhamme. One þy geare gegadrode an hloþ wicenga  
'here went the army to Cirencester from Chippenham. And in that year assembled a troop (of) Vikings'

## RPE 11.5 Old English to Middle English Spelling

The following words are given in their Old English and Middle English spellings. Examine the list, and describe the spelling environments that determined the change in spelling of the Old English letter *c* during the Middle English period (from Millward 2012: 132).



Old English	Middle English	Present-Day English
candel	candel	'candle'
castel	castel	'castle'
cese	chese	'cheese'
cest	chest	'chest'
ciele	chile	'chill'
cild	child	'child'
clag	clay	'clay'
cleofan	cleven	'cleave'
cnif	knif	'knife'
cniht	kniht	'knight'
cuppe	cuppe	'cup'
cwacung	quakinge	'quaking'
cwealm	qualm	'qualm'
cwellan	quell	'quell'
cweorn	quern	'quern'
cycene	kichene	'kitchen'
kynd	kind	'kind'
cymel	kernell	'kernel'

- In what environments did OE *c* remain ME *c*?
- In what environments did OE *c* become ME *ch*?
- In what environments did OE *c* become ME *k*?
- In what environments did OE *c* become ME *q*?

### RPE 11.6 Middle English Grammar

Although the word order of Middle English is similar to that of Present-Day English, the sentences below illustrate some important differences. The first five were written in the first half of the twelfth century (and are therefore closer to Old English). The second five were written in the last half of the fourteenth century (and are closer to Early Modern English).

- For each sentence, describe how the word order differs from present-day use.
- What morphological differences (prefixes and suffixes, both inflectional and derivational) from Present-Day English do you notice in each sentence? What similarities?
- What words are familiar to you in each sample? Can you identify any vocabulary that may have come from French?
- What are some spelling differences?
- How are these two samples different? In what way is the first sample “older” than the second? (In what ways is the first sample closer to Old English than the second?)

#### From *The Peterborough Chronicle* (early Middle English)

- his gear heald se kyng Heanri his hird æt Cristesmæsse on Windlesoure.  
'This year King Henry held his court at Christmas in Windsor.'
- And him com togæ es Willelm eorl of Albamar.  
'And William, Earl of Aumale, came against him'

- c. þerefter come ðe kinges dohter Henries, ðe hefde ben emperice in Alamanie.  
'Thereafter came King Henry's daughter, who had been empress in Germany.'
- d. þe King him sithen name in Hamtun.  
'The King afterwards captured him in Hampton.'
- e. Sume he iaf up, and sume ne iaf he not.  
'Some he gave up, and some he did not give.'

### From Chaucer's *Canterbury Tales*, "Tale of Melibee" (late Middle English)

- f. Thre of his olde foes han it espyed.  
'Three of his old foes have noticed it.'
- g. Wepying is not thing deffended to hym that sorweful is.  
'Weeping is by no means forbidden to him that is sorrowful.'
- h. And whan this wise man saugh that hym wanted audience, al shamefast he sette hym down agayn.  
'And when this wise man saw that audience was lacking for him, all ashamed he sat down again.'
- i. My lord, I you biseche as hertely as I dar and kan, ne haste yow nat to faste.  
'My lord, I beseech you as heartily as I dare and can, don't move too fast.'
- j. But seyeth and conseileth me as you liketh.  
'But tell and counsel me as it pleases you.'

### RPE 11.7 Semantic Change

Remember that the meanings of words shift over time and that many words in contemporary English originally meant something entirely different. Look up the following words, and find out what their meanings were both before and after the Early Modern English period. Explain whether their meanings have *ameliorated*, *pejorated*, *narrowed*, or *broadened* (you may have to go back to Chapter 9 for a quick review!).

lust, battle, carp, harlot, scant, jolly, luxury, sermon, read, knave, boy

### RPE 11.8 Etymology of English Words

Using a good etymological dictionary, choose at least three of the following words and determine what Indo-European language the word comes from. Is the word borrowed into English or native to the language? You can find this out by seeing whether the dictionary lists a date of entry into English from another language. If the word is native to English, the dictionary will usually list Old English or Anglo-Saxon as the source language. Also try to determine if there are other English words that derive from the same root.

bath, charity, cheer, clerk, clue, companion, hell, host, guest, corn, doom, fantasy, fee, galore, genius, gentle, glisten, group, holy, humor, kind, know, lace, liberal, maniac, manure, mild, mood, napkin, nausea, nature, nice, outlaw, pain, pity, sad, silly, soap, virtue, wit

**RPE 11.9** Early Modern English Syntax

When you examine Early Modern English texts, the differences are not as obvious as they are in Middle English, but they are still notable. Find a text excerpt (or more than one) written during the Early Modern English period (1500–1800), and see if you can find and record at least three of the following syntactic features typical of the language of the day. Explain how each is different from Present-Day English. (You may use the excerpts provided in textbooks on the history of the English language, but Shakespeare's plays and sonnets are an excellent resource, as is the King James version of the Bible.) Write down your examples (and where you found them) to share with the class.

- a. adjectival double comparatives: *most unkindest*
- b. pronouns: especially look for *thou* and *you*
- c. questions without auxiliary *do*: *Know you?*
- d. negation without auxiliary *do*: *If I become not?*
- e. Orders other than SVO
- f. plurals without *-s*: *a brace of horse, shoen*

Feel free to discuss aspects of grammar other than those listed here. There are many more differences between Early Modern English and Present-Day English grammar than these!

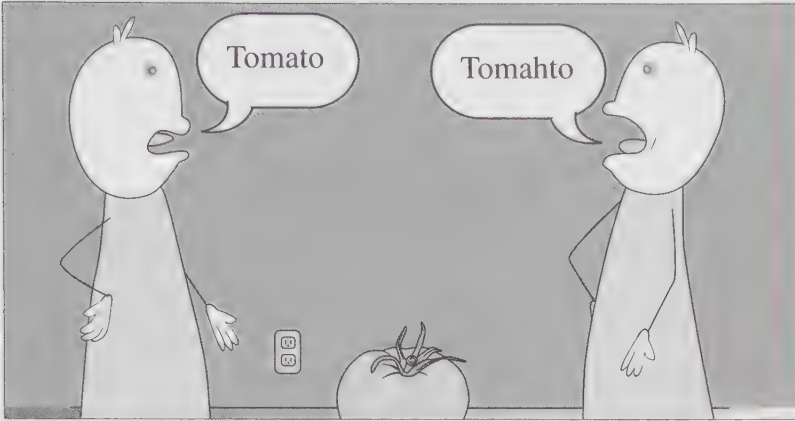
**RPE 11.10** The Etymology of Names

- A. Look up the etymology of your first name. A good source is the *Behind the Name* website: <http://www.behindthename.com/>.
- B. What language does it come from? Is it Indo-European?
- C. What does it mean?
- D. What are cognates of your name in other languages? For example, Irish *Sean* is a cognate of English *John* and Scottish *Ian*. All descend originally from Latin *Iohannes*.
- E. Compile a list of the languages of origin of your first names. Which languages do most names come from? Why?
- F. How do English first names reflect the history of the language? What languages are represented, and why?

*Answers to Exercise 1*

Non-Indo-European languages: L1 = Japanese (Altaic family), L5 = Hungarian (Finno-Ugric or Uralic family)

Indo-European languages: L2 = Sanskrit (Indic family), L3 = Wendish (Slovenian-Slavic family), L4 = Old Saxon (Germanic family)



## Chapter at a Glance

# English Goes Global

## Key Concepts

- The study of language change over time (historical linguistics) overlaps the study of language variation over space (sociolinguistics).
- American dialects, based on dialects of British English, differ according to a wide range of complex factors, including region, ethnicity, race, gender, and social class.
- Certain dialects and languages have higher status than others, which does not mean that any language variety is better linguistically but is simply a reflection of society's attitudes.
- Standard English is in large part an idealization of the language that we perceive to be most prestigious or preferred.

## Did You Know . . . ?

The Ann Arbor Trial

Aladdin Speaks Standard English?

*Language Alive!* German Goes from Good to Bad

Urban Dictionary

*Linguistics in the News* Linguistic Profiling

*Accent on* Dialect Coaches

## What Is a Dialect?

### The Origins of American English

British English Goes to the New World

### American Regional Dialects

Dialects and Settlement Patterns

Drawing Dialect Boundaries

Appalachian English

New England English

American "English" Vocabulary

### Ethnic Dialects

African American English

Native American English

Chicano English

### Social Dialects

Social Networks

Communities of Practice

Social Class and Language Attitudes

### English Keeps Traveling

Australian English

Caribbean English

English in Asia

English in Africa

English as a Global Language

### Language Variation and Language

#### Discrimination

Standard English and "General American"

Dialect Pride

### The Future of English Dialects

#### Summary

#### Sources and Resources

#### Review, Practice, and Explore



*Words, like fashions, disappear and recur throughout English history, and one generation's phraseology, while it may seem abominably second-rate to the next, becomes first-rate to the third . . .*

—VIRGINIA GRAHAM

### language variation

language change in progress, such as the Northern Cities Vowel Shift

### sociolinguistics

study of how language varies over space (by region, ethnicity, social class, etc.)

In Chapter 11, we introduced you to the major discoveries of historical linguistics, namely, that relationships among languages can be determined through the study of regular sound correspondences and that these relationships provide evidence for language families that can be traced back to common ancestors. In this chapter, we address the study of language change that occurs not over time but right now, what is also called the study of **language variation**, the focus of the field of **sociolinguistics**.

As you might imagine, historical linguistics (language change) and sociolinguistics (language variation) overlap: Both concern the study of grammatical patterns that differentiate one language variety from another. Consider, for example, the vowel shifts that we discussed in Chapter 3. Recall the Northern Cities Vowel Shift that is affecting the accents of English speakers in Chicago, Detroit, Rochester, Cleveland, and Buffalo. Another vowel shift, referred to as the Great Vowel Shift, occurred long ago during the Early Modern period. The first is a change in progress (and at the moment, a variation) that allows us to see how different varieties of English are developing over a particular geographical region, developing *over space* in the United States. The second is a change that occurred in the past; it developed *over time* and became established in the language. Variation overlaps with change when a particular variation is adopted by the speech community and passed on to following generations. At that point, we say that the language has changed.

In this chapter, we discuss language variation over space in some detail. Why do languages merge and diverge, and how do different varieties, or dialects, of a single language come to be? As we'll see, geographical separation is a major factor leading to language variation (and ultimately to language change). Language variation often results when people are isolated on islands or separated by mountains or rivers. To this day, for example, many speakers in areas east of the Connecticut River, including New York and New England, do not pronounce [r] following a vowel in a word such as *car* ("cah"), but speakers west of the river do.

Geographical barriers and boundaries are only part of the story of language variation, however. Speakers' age, gender, occupation, social class, religion, and even politics can influence language variation. Another important factor is speakers' attitudes about how they and others talk, what they consider good and bad language, and what is considered standard and nonstandard.

So, the study of language variation involves not only determining what linguistic features distinguish language varieties but also what kinds of geographical and social factors lead to language variation. In this chapter, we will discuss some of the factors that give rise to the diverse dialects of American English, and we'll also take a look at different "Englishes" that have developed around the globe.

## What Is a Dialect?

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In our discussion of what a language is in Chapter 1, we pointed out that this concept is not always easy to define because, although we may say that different speech communities speak English, the varieties of English spoken in each community (and even among individuals, to some extent) might be quite different, making it difficult to draw the line between a dialect and a language. It can also sometimes be difficult to decide at what point two language varieties are distinct enough to be distinct languages.

Recall that linguists generally consider two language varieties to be *dialects* of the same language if the speakers of each can understand each other, if the language varieties are **mutually intelligible**, and if each has systematic grammatical differences from the other. By "systematic grammatical differences," we mean differences in grammar, pronunciation, and vocabulary. Languages, on the other hand, are varieties that are not mutually intelligible. Keep in mind, however, that many language varieties fall somewhere in the middle of a language–dialect continuum. And it's also important to remember that a dialect is much more than just an accent, though this is often how we recognize speakers of dialects different from our own. Accent is only one (phonological) way in which we distinguish one dialect from another. As you'll see as we explore dialects of English in this chapter, differences among dialects involve much more.

**mutually intelligible**  
language varieties  
that can be  
understood by  
speakers of the two  
(or more) varieties

## The Origins of American English

---

Before we turn to specific grammatical distinctions among American dialects, we'll first provide a brief overview of how they came to be and how English spread from the British Isles, where we left it in Chapter 11, to what became the United States.

### British English Goes to the New World

The first permanent English settlements in the New World were on the east coast of North America: Jamestown, Virginia, in the south in 1607 and Plymouth, Massachusetts, in the north in 1620. We know they were

settled by people from England. It is impossible, however, to trace the origins of most of these settlers, for there are no records of where they came from in England, only the port from which the ship sailed (London, in most cases). Many people came in search of religious freedom—the Puritans in New England, the Catholics in Maryland, and the Quakers in Pennsylvania. Others were fleeing economic disaster, and most did not have a lot of education. Though we can say that they spoke Early Modern English, they did not all speak the same dialect; British English of the time was (and still is) made up of many regional and social varieties.

### British English Influences on American English

The linguistic effects of different British settlement groups that landed up and down the coast can still be heard in American dialects today. One of those features is the pronunciation of the [r]s after vowels, called **post-vocalic [r]**. While everyone who speaks English pronounces [r] word-initially, as in *rock* and *red*, some dialects “drop” [r] after vowels and before consonants, pronouncing *park* and *work* more like “pahk” and “wuk.” Several “r-less” dialects of English exist all up and down the coastal United States (in eastern New England but also in parts of the southern coast all the way to Florida) and are attributed to settlement of these areas

by r-less speakers from southeastern England. Well-known examples of r-less dialect areas include Boston, Massachusetts, and Tidewater, Virginia. Tidewater was also part of the Southern plantation agricultural system, and r-lessness spread to the English eventually spoken by slaves, influencing what was to become African American English (discussed in more detail in a later section). Not all coastal areas of the eastern United States are r-less; speakers of “r-ful” dialects of British English also settled along the coast, as did r-ful Scots-Irish from Northern Ireland, who greatly influenced the speech of upland Virginia colonists.

Another feature of seventeenth-century British speech is the [æ] sound in words like *fast* and *dance*, which was abandoned (in favor of [a]) in southern England at the end of the eighteenth century but continues in North America. Another difference between British and American English is the use of the past participial form *gotten* instead of *got*: Americans typically say “She has gotten hit by the ball,” whereas most British speakers say, “She has got hit by the ball.” The use of *gotten* sounds quite archaic to British speakers today, though it was common in Britain two centuries ago. In fact, many of the distinctions in pronunciation and grammatical structure that distinguish American dialects from each other have British origins.

**post-vocalic [r]**  
distinctive feature  
of many dialects  
of English (which  
pronounce [r] in  
words such as *car*  
and which don’t:  
“cah”)

hwæt!

African American English  
has more speakers than any  
other variety of post-vocalic  
r-dropping dialect. See <http://www.pbs.org/speak/seatosea/americanvarieties/southern>.

## American Regional Dialects

---

During the seventeenth century, many more immigrants came to North America, settling all along the Eastern seaboard. These settlements soon dotted the east coast of the New World. Between 1620 and 1640, more than 15,000 new immigrants arrived in New England from Britain. Only 150 years later, according to the first census in 1790, the population of the newly formed United States had grown to about four million. At this point, however, most European settlers still lived east of the Appalachians and were still of British ancestry (Svartvik & Leech 2006: 80). Through the next century, diverse dialects and as well as distinct languages began to blend, and some of the earlier distinctions were lost. This process continued throughout the nineteenth and twentieth centuries as people migrated westward.

### Dialects and Settlement Patterns

Three main dialects existed at the time of the American Revolution: New England, Midland, and Southern. Soon, as the settled areas grew crowded, people began to move in search of new land and new opportunity. New Englanders moved westward into upper New York State and beyond into the Great Lakes region. Midlanders moved west along the Shenandoah Valley and then into what is now the Midwest and beyond to the western coast. Southerners moved west and south down to the Gulf Coast but no farther west than Texas. These three main dialects still exist today; and a fourth, Western, came into existence after the long process of westward expansion began.

The dialect communities and settlement patterns are not quite that simply defined, however. The three great westward movements were not always along horizontal parallels, and some interior regions in the western part of the country were settled after the growth of settlements on the Pacific Coast. Dialect communities that spread in horizontal bands across the country began to be disturbed by second waves from the east and by new waves of immigrants from Europe and elsewhere. All of this means that it is very difficult to draw dialect boundaries west of the Appalachians.

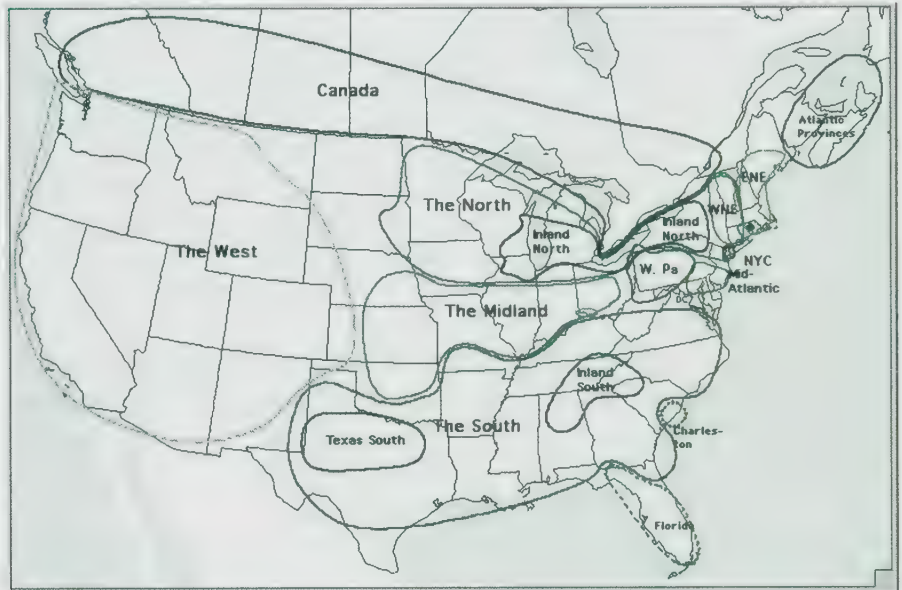
The Rocky Mountain area is full of individual settlements that date from several periods of migration. Some settlements were left behind by pioneers of the earlier period, first by those who went south into California and later by some who went northwest into Oregon. The area around the Rocky Mountains has mostly Midland dialect features but includes a number of Northernisms, probably carried by the early Californians who returned eastward.

The Northwest region, including Washington, Oregon, and Idaho, was only sparsely settled before 1846, when the western end of the boundary between the United States and Canada was finally drawn. In 1853, a separate Washington Territory was created, and the population increased. Some settlers arrived directly from the East over the Rockies; others took a more northerly route,



**Figure 12.1** U.S. Regional Dialects

Source: From map 11.15, Labov, W., S. Ash, & C. Boberg. 2006. *The atlas of North American English* (New York: Mouton de Gruyter). Reprinted by permission of Professor William Labov.



the first leg of which was along the Erie Canal; and still others came from the coast of California (see Figure 12.1).

## Drawing Dialect Boundaries

**dialectologist**  
sociolinguist  
who focuses on  
cataloguing and  
mapping dialects

How do linguists come up with dialect maps? **Dialectologists** (sociolinguists who focus on cataloguing and mapping dialects) typically conduct extensive interviews with speakers in a particular region, attempting to elicit information about pronunciation, grammar, and vocabulary. Interviewers often use detailed questionnaires, collecting and compiling data over a long period of time. These data are then plotted on a map.

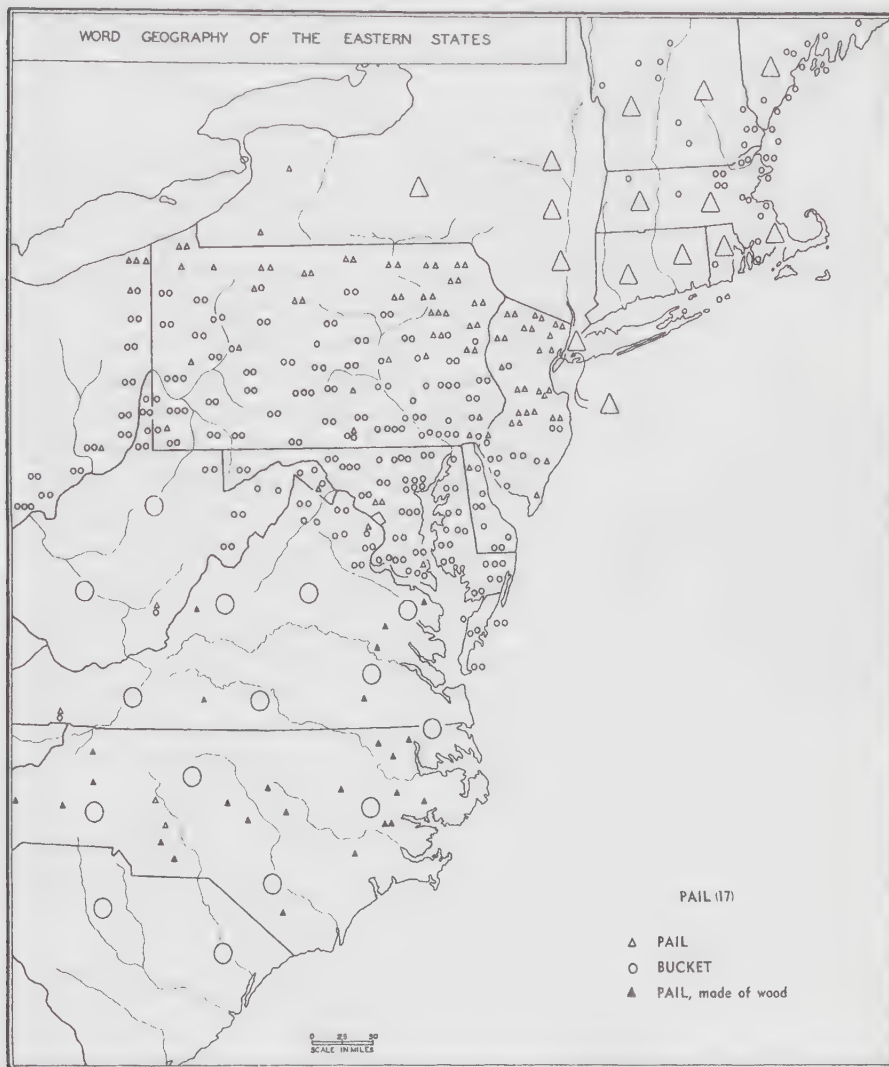
Hans Kurath, a pioneer in what we might call dialect cartography, published *A Word Geography of the Eastern United States* (1949) as part of a larger project, the *Linguistic Atlas of the United States and Canada*, begun in 1931 (and only partially completed and never published). Kurath's original dialect boundaries are still largely considered intact, though some changes have occurred. Figure 12.2 shows how Kurath plotted the distribution of the terms *pail* and *bucket*, one of the distinctions between dialects in southern and northern Pennsylvania.

As you can see, Kurath's map shows where each term was more widely used—way back in the 1930s and 1940s—and also the line of demarcation between the two, illustrating that speakers in southern Pennsylvania said *bucket*, and those in the north part of the state said *pail*. This boundary is called an **isogloss**, and in early dialect research, dialect areas were determined by large “bundles” of such isoglosses.

**isogloss** geographical boundary of a particular linguistic feature

**Figure 12.2** Pennsylvania Dialect Boundaries

Source: Fig 66 from *A Word Geography of the Eastern United States*, by Hans Kurath (Ann Arbor: The University of Michigan Press, 1949)/University of Michigan Press.



More recent dialect research investigates much more than variations in vocabulary, of course. Several noteworthy projects have been devoted to mapping the features and distribution of dialects across the United States, including Frederic Cassidy's *Dictionary of American Regional English* (begun in the 1960s and still in progress), and William Labov, Sharon Ash, and Charles Boberg's *The Atlas of North American English* (ANAE), published in 2005. ANAE grew out of Labov and colleagues' TELSUR project, in which linguistic data was gathered from extensive telephone surveys (hence, the name TELSUR) of speakers across the

country. (You can visit the TELSUR website at [http://www.ling.upenn.edu/phono\\_atlas/home.html](http://www.ling.upenn.edu/phono_atlas/home.html).)

We'll now look at two examples of American regional dialects in a bit more detail, Appalachian English and New England English, to give you an idea of what are called **regionalisms**, or features that distinguish one regional dialect from another regional dialect.

**regionalism** feature that distinguishes one regional dialect from others

## Appalachian English

The Scots-Irish (so called because they came from Scotland, stopped in Ireland, then settled in America) were the largest group to settle in the area known as Appalachia, which they did in great numbers in the late 1700s. The Appalachian Mountains stretch from Maine to Georgia, but the heart of Appalachia is in the mountainous parts of Georgia, South Carolina, North Carolina, Tennessee, Virginia, West Virginia, Kentucky, Ohio, and Maryland. The Scots-Irish settlers mingled with the earlier settlers, the Germans who had settled

mostly in Pennsylvania (known as the Pennsylvania Dutch), though some moved on south, and with settlers from England, Holland, and other parts of Europe. This blend of languages and dialects in the eighteenth century led to the dialect we now know as Appalachian English. Once permanent settlements were established, two basic lifestyles developed: small-scale farming (often in mountainous areas) and then later, when the country grew rapidly in the nineteenth century, small-scale industry, mostly lumber and coal mining. The later decline of these industries left many people in poverty, which persists to this day throughout much of Appalachia.

We have seen some of the linguistic features of the dialect in other chapters. As with any dialect, there are distinct features of phonology, morphology, syntax, and vocabulary. We discussed the Southern Vowel Shift (Chapter 3), which is typical of Appalachian vowels as well. The deletion of /l/ (Chapter 4), which is in transition in the speech of most Americans (with the /l/ coming back into the pronunciation of words like *caulk*, *palm*, and *folk*), is unpronounced in the speech of many Appalachians in such words as *wolf*, *shelf*, and *help*, as it was in many dialects in England before the eighteenth century. Syntactically, the past tense form of *be* with the second person singular, *you*, is *you was* rather than *you were*. This verb form is common in many contemporary English dialects and also has a long history. Until the seventeenth century, *thou* (the nominative form when used as a subject) and *thee* (the accusative form when used as a direct object) were used for second-person singular pronouns. When these forms were lost and *you* was substituted, the singular verb *was* was still used, resulting in a neat paradigm for the past tense of *be*:

I was	we were
you was	you were
he/she/it was	they were

hwæt!

Many people know of Appalachia and its mountains because of the Appalachian Trail, stretching some 2,000 miles from Maine to Georgia and hiked by an estimated 3 to 4 million people each year.

*You was* was still used in literature up till the 1800s and has always been common in speech. Noah Webster tried to defend it, though its usage began to decline in the nineteenth century, probably due to the analogy with the second-person plural *you were*.

*Ain't* (discussed in Chapter 5, “*Ain't Ain't Had It Easy*”) is another word with quite a long history; *ain't*, like *you was*, has not always been such a stigmatized verb form. It is still very common in Appalachian English as it is in many other dialects. Another feature of the dialect is the use of what linguists call “positive *anymore*.” The word can be used to mean something like ‘nowadays’, and it can appear without another negative: *Things are getting worse anymore. She's so rude anymore.* In other dialects, *anymore* means ‘no more’ and can only be used with another negative (resulting in double negation! Egads!): *She doesn't do yoga anymore. She is not nice anymore.* The positive *anymore* has now spread to other dialects of American English.

Some colorful words and phrases of Appalachian origin have now expanded into General American; these include *spitting image of* (from *spirit and image of*), *snickerdoodles*, *varmint*, *tacky*, and *three bricks shy of a load*.

Though the Appalachian dialect does maintain some features of older English, it is not, as is sometimes mistakenly assumed, a relic of Elizabethan English. Like many dialect communities that remain more isolated than others due to their remoteness in the mountains or on islands, it may retain features of older versions of the language. However, it has just as many new features, or innovations. So it is not the case that the Appalachian dialect is closer to the language of Elizabethan England than other dialects.

## New England English

Some features of the speech of the Puritans, who settled in New England after arriving mostly from East Anglia in England in the early 1600s, can still be heard in the speech of many who live in New England. Some of those features are the pronunciation of a mid back vowel /ɔ/ in words like *caught* and *fought*; the *r*-dropping after vowels (discussed earlier and in Chapter 4); and the low fronted /a/ of words like *car* and *father*, which gives the dialect what some call a nasality. The early speech of these settlers influenced American speech primarily in vocabulary, including idioms.

Many idioms associated with sailing (long prominent in the waters of New England) come from this dialect: *three sheets to the wind* and *take the wind out of your sails*, as well as others including *cool as a cucumber*, *don't know beans about . . .*, *wouldn't touch it with a ten-foot pole*, and *happy as a clam*.

## American “English” Vocabulary

Many languages have left their mark on English as immigrants from non-English-speaking countries have come to the United States over the last two

hwæt!

Why is a clam happy? The entire phrase is “happy as a clam at high tide” because clams are dug at low tide. At high tide, they're safe. For meanings and origins of sailing and other common sayings, go to [PhraseFinder.com](#).



centuries. The Spanish occupied parts of the Southwest and the West, leaving their mark mainly with place-names and more recently with many words for foods (*burrito, tamale, taco, salsa, cilantro, guacamole, enchilada, oregano*). There have also been borrowings from German (*pretzel, streudel, quartz, dachshund, hamburger, kindergarten*), Italian (*confetti, crescendo, gondola, motto, pizza, regatta, lasagna, salami, zucchini, piccolo*), Yiddish (*glitz, bagel, nosh*), Czech (*polka, robot*), Russian (*babushka, borscht, borzoi, samovar, troika, tundra*), Dutch (*boss, bushwhack, cruller, snoop*), French (*suede, trousseau, camouflage, chauffeur, coupon*), Celtic languages (*blarney, brogan, slew, colleen*), Japanese (*jujitsu, kamikaze, karaoke, origami, sukiyaki, tsunami*), Hawaiian (*aloha, hula, lei, ukulele, wiki*), and African languages (*goober, gumbo, safari, impala*). Native American languages had very little influence on English; however, Tables 12.1 and 12.2 show vocabulary items borrowed from various Native American languages.

RPE

12.3

RPE

12.4

Table 12.1

English Words of Native American Origin

Native American	English
Abenaki	wigwam
Algonquian	caucus
Algonquian, Abenaki?	skunk
Algonquian, Narragansett?	moose
Algonquian, Powhatan?	muskrat, opossum, hickory
Algonquian, Cree, Ojibwa, or Narragansett	woodchuck
Algonquian, Cree, or Ojibwa	pecan
Carib	potato
Chinook	potlatch
Chippewa	moccasin
Choctaw	bayou
Dakota	teepee
Inuit	kayak
Micmac	toboggan, caribou
Nahuatl	chocolate
Narragansett	powwow, squash, succotash, papoose
Ojibwa	totem, chipmunk
Powhatan	hominy, pone, raccoon, tomahawk
Quechua	jerky

Table 12.2

## U.S. State Names and Native American Origins

Alabama	Creek word for 'tribal town'
Alaska	Russian version of Aleutian word, <i>alakshak</i> , 'peninsula', 'great lands', or 'land that is not an island'
Arizona	Spanish version of O'odham (formerly called Papago) word for 'little spring place' or perhaps Aztec <i>arizuma</i> , 'silver-bearing'
Arkansas, Kansas	Sioux word meaning 'south wind people'
Connecticut	From Mohican or other Algonquian words meaning 'long tidal river'
Illinois	French for Illini or land of Illini, an Algonquian word for 'men' or 'warriors'
Indiana	Not a Native American word but means 'land of the Indians'
Michigan	From Chippewa words <i>mici gama</i> , 'great water', after the lake of that name
Minnesota	From Dakota Sioux word meaning 'cloudy water' or 'sky-tinted water' of the Minnesota River
Mississippi	Probably from Chippewa <i>mici zibi</i> , 'great river'
Missouri	An Algonquian term meaning 'river of the big canoes'
Nebraska	From Omaha or Otos word meaning 'broad water' or 'flat river', describing the Platte River
North and South Dakota	<i>Dakota</i> is Sioux for 'friend' or 'ally'
Ohio	Iroquois word for 'good river'
Oregon	Of unknown origin but may come from an Algonquian word for 'good, beautiful'
Texas	Variant of Caddo word meaning 'friends' or 'allies' and applied to them by the Spanish in eastern Texas; also written <i>texias</i> , <i>tejas</i> , <i>teysas</i>
Utah	From a Navajo word meaning 'upper' or 'higher up' as applied to a Shoshone tribe called Ute

## Ethnic Dialects

Thus far, we have discussed dialects that differ primarily due to geographical location. People who live in one place talk differently from people in another place due largely to the settlement patterns of that area—the linguistic characteristics of the people who settled there are the primary influence on that dialect, and the speech of most people in that area shares

similar dialect features. However, the next dialect we discuss, African American English, is spoken primarily by Americans of African descent; its unique characteristics were due initially to settlement patterns as well but now persist due to the social isolation of African Americans and the historical discrimination against them. African American English is therefore more accurately defined as an ethnic dialect than as a regional one. We then turn to another ethnic dialect of English, Native American English, which, like African American English, became established as a result of shared cultural identity and social isolation from other groups.

## African American English

African American English (AAE), also known as Black English, Ebonics, and African American Vernacular English (AAVE), developed in the Southern states when speakers of dozens of distinct West African languages were brought to the United States as slaves and forced to learn English. Slave masters deliberately separated slaves who spoke the same or related languages so that they couldn't communicate with one another. But since the Africans and the whites on the plantations needed to communicate, a pidgin language, and then likely a creole language, developed. That early African-influenced, English-based creole developed by the slaves greatly influenced today's African American English. This variety was also influenced by and shares characteristics with the speech of Southern white speakers. And in turn, the Southern dialect was influenced by the speech of African Americans; one of the main influences of the slaves' language on the Southern white speakers was via the speech of the white children of the aristocratic slave owners. Their primary caretakers were typically the black nannies, and their playmates were the black children of slaves.

Some of the features of the current African American dialect are thought by some scholars to come directly from West African languages. One of these features is the use of aspect rather than tense: *He sleepin'* (meaning 'right now') versus *He be sleepin'* (meaning 'regularly, all the time'). This kind of aspectual marking is found in many West African languages. Another is the use of *done* as a verbal aspect marker: *He done gone*. (This word may have been borrowed from the West African language Wolof word *doon*.) Linguist Lisa Green (2002: 45–47) provides a detailed analysis of the AAE aspectual markers *be*, *bin*, and *done*, showing that although they appear similar in form to auxiliary verbs in Standard American English, in AAE these words have quite different meanings. See Table 12.3.

Some phonological features, such as the voiced interdental /ð/ which becomes /d/ in initial position—*this* as *dis*, *they* as *dey*—may have come from African languages' distinct phonological systems.

### hwæt!

The term *Ebonics* (a blend of *ebony* and *phonics*) was coined by Robert Williams in 1973, but it wasn't until the Oakland Ebonics controversy in 1996 that the term became a household word.

Table 12.3

## African-American English Aspectual Markers

REGULAR	EMPHATIC AFFIRMATION	NEGATIVE
<b>Habitual</b>		
be eating	<i>do</i> be eating	don('t) be eating
'am usually/always eating' or 'usually eats'	' <i>am</i> usually/always eating or ' <i>do</i> usually eat'	'am not usually eating' or 'don't usually eat'
<b>Remote Past (state or habit)</b>		
<i>bin</i> eating	<i>have bin</i> eating	ain('t)/haven't <i>bin</i> eating
'have been eating for a long time'	<i>have</i> been eating for a long time'	'hasn't/haven't been eating for a long time'
<b>Remote Past (completion)</b>		
<i>bin</i> ate	<i>have bin</i> ate	ain('t)/haven't <i>bin</i> ate
'ate a long time ago'	' <i>did</i> eat a long time ago'	'didn't eat a long time ago'
<b>Regular Resultant State</b>		
done ate	<i>have done</i> ate	ain't done ate
'has/have already eaten'		'hasn't/haven't already eaten'

(Adapted from Green 2002: 45–47.)

A large number of West African words came into American English: *tote* ('carry' in Kikonongo), *bug* ('to annoy', perhaps from Kikonongo), *mumbo jumbo* (a West African god's name), *jazz* (perhaps from Arabic *jazib* via Bantu, meaning 'one who allures'), *chigger* (from Wolof or Yoruba), *okra* (from Akan), *yam* (from Twi *anyinam*), *banana* (from Wolof), and others.

The speech of African Americans gradually became more like the speech of their Southern white neighbors through what may have been **decreolization**, the process by which a creole over time takes on more and more features of the language it is in contact with (usually a language with more social prestige, such as the speech of Southern whites, in this case). African American English spread rapidly around the country as black people began moving first to the Northern cities in the 1920s and then to other urban centers across the country. Despite the dispersal of African Americans across the country throughout the twentieth century, most speakers still share enough linguistic features that the dialect is still

**decreolization**  
process by which  
a creole language  
becomes more  
like the superstrate  
language



considered a single dialect. So in this case, it is not geographical isolation but social and ethnic identity shared by the speakers that maintains the language variety.

### Did You Know...?



#### The Ann Arbor Trial

In 1977, a case was brought by the parents of some children of the Martin Luther King Elementary School in Ann Arbor, Michigan, against the Ann Arbor school board. The parents claimed that the school failed to take into account their children's racial, sociocultural, and linguistic background. They argued that a linguistic barrier impeded their children's academic performance because their home language diverged from the school language so much that they were prevented from having equal educational opportunities. Their case depended on whether African American English was shown to be so different from some Standard English that it constituted a barrier to learning. Recordings were played of the children, and a team of linguistic experts testified to the extent to which the language was different, to the history of the dialect as a creole with African origins, which suggested that the differences were the result of racial segregation, an important aspect of the case. The plaintiffs won the case, so the school board had to take steps to help the teachers better instruct the African American-speaking children in their use of academic English. Since this historic case, other districts (e.g., in Los Angeles and Oakland, California) have developed similar programs with excellent results, though they remain controversial.

*For more information*

Joiner, C. 1979. *The Ann Arbor decision: Memorandum opinion and order and the educational plan*. Washington, DC: Center for Applied Linguistics.

Labov, W. 1982. Objectivity and commitment in linguistic science: The case of the black English trial in Ann Arbor. *Language in Society* 11(2):165–201.

## Native American English

The speech of another minority group in the United States, Native Americans, has not been very well represented in the descriptions of English dialects in the United States. Native American English, like African American English, is best defined as an ethnic rather than a regional dialect, influenced by a range of social factors beyond race. The language varieties that fall under the umbrella of Native American English are quite diverse and vary depending on a number of factors. For example, some varieties are influenced by the native languages spoken

by the older adults while others are not; some varieties are native languages (first languages), and others are learned as second languages and incorporate features of the native language. Leap (1993) argues for some “pan-Indian English” features that all varieties have in common and which arose from the social segregation of Native Americans from the white community.

One feature shared by varieties of Native American English across North America and Canada is a prosodic rhythm that is syllable timed rather than stress timed as is typical of the prosody of most dialects of English (Coggshall 2007). In a syllable-timed language, each syllable has equal stress, which gives the language what might be called a machine-gun rhythm. In a stress-timed language, some syllables are longer than others, and stressed syllables have approximately the same length (sometimes described as a “Morse code” rhythm). French is a syllable-timed language, and English is a stress-timed one. Though researchers aren’t certain why Native American English is syllable timed, it is thought to be an influence from bilingual speakers of many Native American languages west of the Mississippi who speak syllable-timed languages such as Cherokee. That feature of their language has transferred to English. And interestingly, it has transferred now even to monolingual English speakers in tribes all across the country.

Another widely shared feature of Native American English is the absence of the verb *be* in certain structures. Here are some examples from Isletan English, spoken in Isleta, New Mexico, by people for whom Tiwa is the ancestral language (Leap 1993: 70).

She [ ] a Red Corn people.  
 They [ ] just goin’ by the old ways, yet.

Leap provides many examples of how variations in different varieties of Native American English can be attributed to a number of factors, including speakers’ age, influence of ancestral language, gender, and so on. The syntax and semantics of Navajo, for example, seem to account for the use of the following prepositional phrases in Navajo English. (Examples from Cook & Sharp 1966: 28, cited in Leap 1993: 74.)

Got to downtown  
 At store  
 All kinds from birds

Flanigan (1984: 92) makes a similar argument for deletion of prepositions in Lakota English (cited in Leap 1993: 75):

I color [ ] this. (*with* is the missing preposition)  
 We like to ride [ ] horse.  
 You wanna go [ ] bathroom?

Flanigan suggests that this variation comes from the influence of French-Indian Creole, a trade language spoken during the eighteenth and early nineteenth centuries in which preposition deletion was used. (Leap suggests that this pattern could also be age related, occurring in the speech of younger speakers, who were the only ones interviewed.)

### Lumbee English

Sociolinguists Walt Wolfram and Natalie Schilling-Estes (2006: 206–209) present a fascinating example of an ethnic Native American dialect that seems to have emerged without an ancestral language at all. The Lumbee are the largest Native American group east of the Mississippi River, with more than 55,000 members, more than 45,000 of whom live in Robeson County, North Carolina. The Lumbee make up 40 percent of the county population; African Americans, 25 percent; and European Americans, 35 percent. Each group speaks a different language variety (a result of ethnic segregation). There have been no speakers of the Lumbee heritage language for five generations, and it is unclear if there ever was a Lumbee heritage language; the Lumbee likely emerged from an aggregate of Iroquoian, Siouan, and Algonquian tribes, and no records exist of a distinct Lumbee language. Nevertheless, their very strong ethnic identity has led to the emergence of a Lumbee Vernacular English that is most likely based on English sources rather than ancestral ones, with unique innovations.

One unique feature of Lumbee English is the use of the verb *be*. Rather than saying “I have been to the store,” Lumbee speakers say “I’m been to the store.” They also use “negative *weren’t*,” or the form *were* rather than *was* in negative sentences: *I weren’t there. She weren’t there.* Although this use of *weren’t* occurs in other varieties of English along the coast of North Carolina, it does not occur in the varieties of African American English or Standard English that surround the Lumbee in Robeson County. The Lumbee also seem to have incorporated a unique use of *be* that occurred in Scots and Scots-Irish English but which became obsolete in those varieties: *I hope it bes a girl. They bes doing all right.* This is a use of *be* distinct from the habitual *be* of AAE speakers in the community, again illustrating Lumbee English innovation.

### Chicano English

The United States has been populated by people of Spanish heritage since the fourteenth century. According to the U.S. Census Bureau, as of July 2006, 44.5 million Hispanics were living in the United States, and Spanish speakers make up the majority of current immigrants to the United States (<http://www.infoplease.com/spot/hhmcensus1.html>).

*Hispanic* is an umbrella term the government uses to refer to a variety of groups, and *Hispanic English* is a cover term for a wide range of Spanish-influenced varieties of English. Just as the term *Native American*

*English* fails to capture the diversity of varieties of English spoken by people of Native American heritage, the term *Hispanic English* obscures the diversity of dialects of Spanish-influenced English in the United States. This umbrella term also fails to capture the diverse social, ethnic, and other factors that influence the language of different groups who have in common only an association with Spanish language.

Subcategories of Hispanic English are themselves difficult to define. For example, *Latino English*, the English spoken by people of Latin American descent, is really best described as a continuum that includes monolingual English speakers, bilingual Spanish and English speakers, and speakers with only limited English proficiency. According to Wolfram and Schilling-Estes (2006), no specific dialect features connect all varieties into unified “Latino English.” Varieties of Spanish-influenced English are also spoken by people of Puerto Rican and Dominican descent in New York City, by immigrants to the Northwest from Central America, by the Cuban American population in South Florida, particularly Miami, and by Mexican Americans throughout the United States.

Although *Hispanic English* is not a single language variety, we can still identify certain varieties based on shared features. For example, Chicano English, spoken throughout the American Southwest in California, Arizona, New Mexico, and Texas, has some distinguishing linguistic features. As we saw with other ethnic dialects, however, we can also identify features specific to certain varieties of Chicano English, features which arise from contact with other dialects, among other factors.

One of the most interesting features of Chicano English is that it does not depend on bilingualism. As Carmen Fought (2003) explains, “You don’t need to know Spanish to speak Chicano English.” Chicano English is not “learner English,” and though it does exhibit many influences of Spanish, it is a fully developed variety of English, the native English of many of its speakers. (<http://www.pbs.org/speak/seatosea/americanvarieties/chicano/>; see also Santa Ana 1993, Mendoza-Denton 1997, Fought 2003.)

Chicano English is distinctive because of its vowels (based on Spanish pronunciation), particularly the merger of [i] and [ɪ]. So, *beet* and *bit* are both pronounced *beet*, *sheep* and *ship* are pronounced *sheep*, and the *-ing* suffix is pronounced with [i] as well (*talking* is pronounced something like /tɔkin/, for example). Sounds usually described as interdental (*this*, *then*) are made with the tongue touching the back of the teeth, rather than between the teeth. Chicano English is also syllable timed, like Spanish, rather than stress timed, like English. The influence of Spanish can also be seen in the use of prepositions: *She’s on fifth grade* or *She told the truth for she won’t feel guilty*. Chicano English also shares many features with other American English dialects that are not influenced by Spanish, including consonant cluster deletion (*test* is ‘tes’, and *end* is ‘en’), double negation (*She don’t know*

hwæt!

The terms *Latino* and *Chicano English* are controversial not just because of the diverse heritage of speakers but also because the labels are in the masculine form, not the feminine *Latina* and *Chicana*.



*nobody*), irregular past tense (*Yesterday he come to visit*), and *was* for *were*: *We was there* (examples from Wolfram & Schilling-Estes 2006: 198–199).

As we saw in the discussion of other ethnic dialects, ethnicity is not the only factor influencing Chicano English. Wolfram and Schilling-Estes report that Chicano English speakers in Southern California have adopted habitual *be* (*The news be showing it too much.*) from African American English. Speakers have also adopted “quotative” *be like* and *be all* (*She’s like, “You don’t leave the house.”* and *He’s all, “I’m working for you.”*), a characteristic attributed to Valley Girl Talk, shared now by younger speakers across the United States (Wolfram & Schilling-Estes 2006: 199).

## RPE 12.6

## Social Dialects

As you’ve seen with the examples of African American English, Native American English, and Chicano English, dialects are shaped not only by geography but by other factors as well, including shared cultural identity and isolation from other groups. Sociolinguists have also found that regardless of region, certain generalizations about language variation seem to hold. Urban speakers are more likely than rural speakers to adopt or initiate changes in the language, probably because rural speakers are more conservative and less mobile than urban speakers and because there are fewer of them. In the United States, certain speech patterns appear to be linked with social class. And women, regardless of their social class, appear to generally be more likely than men to conform to prestige norms. Sociolinguists have also found that these generalizations are actually much more complex; in-depth study reveals a much more nuanced picture of factors that shape language variation.

## Social Networks

**social network**  
social relationships  
that characterize a  
group of speakers

Sociolinguists have found that **social network** plays a crucial role in whether speakers maintain a particular language variety or initiate or adopt change. Speakers with denser social networks will be more likely to maintain their language variety even though they are aware that it is stigmatized and lacks social advantage.

Patricia Nichols (1983) found that speakers in an African American community in South Carolina used three language varieties: Gullah (an English creole originated by slaves in the region), a variety of African American Vernacular English, and a variety of English considered standard in the region. Nichols found that older women and men used more Gullah forms, and among the younger generation, males used more Gullah features than young women. Gullah use in this community therefore could not be attributed simply to gender differences. Nichols found that, in fact, Gullah

*hwaet!*

The 2010 film *The Social Network*, about the founding of Facebook, illustrates that the term *social network* now has a meaning distinct from the sociolinguistic one.

use correlated with social networks. Men in the community tend to work in construction and to be in social contact with each other, part of a dense social network. Similarly, older women worked as farm laborers or maids, again as part of a social network. Younger women, however, had begun to take up service jobs that brought them in contact with more Standard English speakers outside of their community, and their social networks became less dense. These young women became the instigators of language change not simply because they were women but because of their social networks.

## Communities of Practice

**community of practice** group whose members come together and share activities, beliefs, and perceptions

Most sociolinguists agree that no single variable (race, class, gender, ethnicity, etc.) can be held responsible for language variation or change. Rather, it appears that **communities of practice** (Eckert & McConnell-Ginet 1992) are key; people's reasons for coming together and their shared activities, beliefs, and perceptions all seem to play a crucial role in language variation and change. Communities of practice are defined not by external factors (number of members in one's social network, whether a speaker is urban or rural) but rather by speakers' sense of membership and active participation in a group.

Mallinson and Childs's 2005 study of women in a small African American community in Appalachia provides a good example of how a community of practice—rather than (in this case) gender alone—explains language variation. They found that “church ladies” (women who attended church and participated in other activities associated with propriety) spoke a dialect that included more features of Standard American English than the “porch sitters,” a group of women in the community whose socializing revolved around conversations on the porch and participation in activities more tied to African American culture (listening to music, for example). The porch sitters tended to use more features of African American English. It is the shared values of each community in this case that plays a role in shaping their language variety.

## Social Class and Language Attitudes

Another factor that shapes language variation is speaker attitudes; what one considers good and bad language, attitudes about social class, politics, and religion all influence our linguistic choices. William Labov, who has studied the dialects of New York City for more than forty years, is well known for his analysis of how the insertion or deletion of [r] in certain dialects is tied to speakers' perceptions of social class. In New York City, *r*-less dialects are stigmatized (post-vocalic [r] is dropped in words such as *four*, *here*, etc., as we saw earlier), and *r*-full dialects have social prestige. Labov designed an ingenious study in which he elicited the phrase *fourth floor* from salespeople in three department stores: Saks 5th Avenue (high prestige), Macy's (mid-prestige), and S. Klein (low prestige). Salespeople in Saks pronounced [r]

LINGUISTICS  
IN THE NEWS

## Linguistic Profiling

Is it racist to say that you recognize someone's voice as black, white, Hispanic, or Asian? Is it sexist to say that the voice on the other end of the line is a woman or a man? Well, only if you use that information to discriminate, according to John Baugh, a professor of linguistics and education at Stanford University. What if, for example, you use that information to decide against a loan application or an apartment rental?

Baugh, an African American, has conducted research on linguistic profiling, the racial identification of a speaker based on the way he or she talks, and the use of that information to make legal decisions based entirely on race. Baugh has conducted numerous experiments using himself as a guinea pig, calling landlords in his "white" voice, his "black" voice, and his "Latino" voice. Typically, his black voice gets about half as many

callbacks as his white voice. And if he calls in his white voice and shows up as a black man? You got it. No rental.

The ABC News program *20/20 Downtown* did a show on linguistic profiling (University of Iowa 2002); you can hear some of the voices used in that program and test your ability to identify someone's race based on their voice at the following link: <http://www.uiowa.edu/~c103112/lingprof.html>. Most people get it correct between 75 and 90 percent of the time.

Baugh's concerns about linguistic profiling are not simply theoretical. In 1999, a Kentucky Supreme Court judge ruled that it was acceptable for a white police officer to identify a suspect as African American based only on the voice heard in an audio transmission from a wired cop. Though Baugh would not disagree that someone can "sound black," using this as concrete

evidence that this identifies the defendant is where Baugh would disagree, and it is what makes such assumptions profiling rather than fact.

If such profiling is admissible as evidence in court, then it sanctions profiling of African Americans or Hispanics who call about apartments, jobs, or loans and never get a callback. The National Fair Housing Act makes it illegal to deny housing to anyone on the basis of race. Baugh has worked with the National Fair Housing Alliance (NFHA), a civil rights organization that works to reverse this trend.

*For more information*

Baugh, J. 2000. Racial identification by speech. *American Speech* 75(4). 362–364.

Johnson, P. 2002. Linguistic profiling. *The Black Commentator* 1. April 5. [http://www.blackcommentator.com/linguistic\\_profiling.html](http://www.blackcommentator.com/linguistic_profiling.html).

62 percent of the time; in Macy's, 51 percent; and in S. Klein, 20 percent. Labov's study shows that the salespeople adjusted their speech style (unconsciously) depending on perceptions of prestige (Labov 1966).

## English Keeps Traveling

English did not stop in North America, of course, but spread to other parts of the globe, including Australia and New Zealand toward the end of the eighteenth century, leading to distinctive varieties of the language there. British colonization in parts of Africa, Asia, and the South Pacific led to unique varieties of English in these places. We discuss next a few of the many dialects of English that are spoken worldwide.



## Australian English

The Dutch began to settle in Australia during the first half of the seventeenth century, but the English came not long after that. They began settling prisoners in penal colonies in New South Wales in the late eighteenth century, and this continued until about 1840. The convicts and the personnel assigned to them were primarily from southern England; many convicts spoke Cockney English, a stigmatized dialect spoken in London's East End. Then there was another wave of immigration from Scotland at the end of the eighteenth century and yet more immigration during the Australian gold rush of 1850.

Australian English borrowed little vocabulary from the aboriginal languages (aboriginal people now make up only 1 percent of the population), though a number of place-names are of aboriginal origin (*Illawarra*, *Coolaburragundy River*). Although Australian English was originally based on British English, meanings have shifted over time: for example, *paddock* means 'field' in Australian English but 'small enclosure for livestock' in British English. Australian English has also borrowed from American English, and the words *truck*, *elevator*, and *freeway* exist, as do British *petrol*, *boot* (of a car), and *tap* (Crystal 1988: 240).

Distinctive vowels mark the Australian dialect. One rather noticeable difference, to American ears, is that the mid and low, front, lax vowels are raised and tense in Australian English; so, /æ/ (as in *sat*) and /ɛ/ (as in *set*) sound more like /ɛ/ and /e/, respectively. And what's rather striking about Australian English is that it is remarkably consistent throughout the country. In an area about the same size as the continental United States (though with a much smaller population), there is very little regional variation, and the subtle distinctions that do exist are based on class and educational factors, not region. There are very few morphological or syntactic differences from other standard varieties of English, though Australian English does share many features of British English that are distinct from American, such as the use of singular verbs with collective nouns: *the government hear*, *the jury decide*, *the team win*. Words that originated in Australia, too, have been borrowed into English, mostly to refer to the flora and fauna encountered by Europeans for the first time: *koala*, *kookaburra*, *kangaroo*, *wallaby*, *wombat*, as well as the word *boomerang*, borrowed from an extinct aboriginal language formerly spoken in the New South Wales area.

## Caribbean English

Caribbean English, also called Western Atlantic English, is a general term for the English used in the Caribbean archipelago and on the Caribbean coast of Central America (including Nicaragua, Panama, and Guyana). The term *Caribbean English* is problematic because in a narrow sense it can refer to a dialect of English alone, but in a broader sense it covers English and the many



## hwaet!

The United States does not have an official language, though many states do.

Alongside English, Hawaiian is an official language of Hawaii, and French is an official language of Louisiana.

English-based creoles (discussed more in Chapter 14) spoken in this region. Traditionally, Caribbean creoles have been (incorrectly) classified as dialects of English, but more and more varieties are being recognized as unique languages. Also, there is often a continuum of usage by speakers between some variety of English and a creole. And although English is the official language of the area that is sometimes called the Commonwealth Caribbean, only a small number of the people in each country speak what we might consider regionally accented standard English as a native language. In many Caribbean countries, however, some standard version of (mostly) British English is the official language and is taught in schools.

One syntactic feature shared by many West Atlantic Englishes is the use of *would* and *could* where British or American English uses *will* and *can*: *I could swim* for *I can swim*; *I would do it tomorrow* for *I will do it tomorrow*. Another is the formation of *yes/no* questions with no inversion of auxiliary and subject: *You are coming?* instead of *Are you coming?* A phonological similarity is that the prosody tends to be syllable timed. The study of all of these language varieties is in its infancy (though more work has been done on Jamaican English), and much work remains to be done to properly describe the many features of the languages, dialects, and creoles of the Caribbean.

## English in Asia

English is studied widely as a second language in many Asian countries, including Japan, China, and Korea. However, in other countries, English is used much more widely as a second language, and many speakers are quite fluent in English. In Singapore, English is commonly learned as a second language and is one of four official languages. (The others are Mandarin Chinese, Tamil, and Malay.)

In many Asian countries in which English is gaining prominence as a second language, unique linguistic features have developed that are becoming standard and are resulting in new standard varieties. In India, for example, Indian Standard English has gained some acceptance, though it is still a matter of debate whether Indian Standard English or British English is a more appropriate standard variety for use in India. Many features of this variety of English are typical of the kinds of variation that nonnative speakers of English make, but given that they are the primary users of the language, these variations (which would be considered errors by native speakers) have become accepted and are becoming standardized. Linguist David Crystal (1995) provides the following examples of features of Indian English. Mass nouns can be used as count nouns: *Bring in the mails*. Progressive aspect can be used with verbs that traditionally denote states: *I am liking it. I am understanding*. There is variation in the use of prepositions, compared to other varieties of English: *stand at line, pay attention on*.

## RPE 12.7

There is some variation in basic word order: *Who you have come for? My all friends are waiting.* And among the unique words Crystal includes are *cousin-brother* (male cousin), *opticals* (eyeglasses), and *crore* (ten million) (p. 360).

## Did You Know...?



## Aladdin Speaks Standard English?

In 1993, the American Arab Anti-Discrimination Committee (AAADC) complained that *Aladdin* discriminated against Arabs. The 1992 Disney film *Aladdin*, set in a “mythical” Arabian kingdom, depicts the main character, Aladdin, and his love interest, Jasmine, speaking American English with a standard accent, while the villains, all Arab characters too, speak heavily Arab-accented English. Michael Precker wrote, “[The use of dialect in the movie] pounds home the message that people with a foreign accent are bad.” Also, after the release of the film in 1992, the AAADC pressured Disney to change the lyrics of the opening song in the film to be less discriminatory. Originally, the lines read, “Oh, I come from a land/From a faraway place/Where the caravan camels roam./Where they cut off your ear/If they don’t like your face/It’s barbaric, but hey, it’s home.” For home video release, the fourth and fifth lines were replaced with lyrics that describe the desert climate and geography, though the last line, with *barbaric*, remained.

*For more information*

Lippi-Green, R. 1997. *English with an accent: Language, ideology, and discrimination in the United States*. New York: Routledge.

Precker, M. 1993. This *Aladdin* is rated PC. *Dallas Morning News*. October 2.

## hwaet!

Zulu is the most common of South Africa’s eleven official languages. In 2011, a new Zulu–English dictionary, the first in forty years, was published to facilitate South Africans’ ability to participate and compete in our global economy.

## English in Africa

English is an official language in many African countries, not because there are many native speakers of English there (except in South Africa, where about 10 percent of the population are native speakers of English) but because of the complex history of most African nations. Due to the many unrelated languages and due to the colonization of most of Africa by European nations throughout the nineteenth and twentieth centuries, English (as well as French and Portuguese) is an official language in many nations, though many of them have from five to ten official languages. As English is used more and more as a second language in Gambia, Liberia, Ghana, Nigeria, Uganda, Swaziland, Zambia, and other countries, it has many unique linguistic features that are becoming standardized in each country and will likely eventually lead to more standardized forms—Nigerian English, Zambian English, and so on.

## RPE 12.8

## English as a Global Language

Today, fewer than one-fifth of native English speakers live in the British Isles. Just to give you an idea of where English ranks as a language worldwide, let's consider the following figures. The question of which are the world's most widely spoken languages is actually rather difficult to answer with certainty, because estimates of the numbers of people speaking a language vary quite a bit. Estimates of the number of people who speak English, for instance, range from 300 million to more than 450 million. Also, we can count either only native speakers of a language or include those who use the language regularly or even primarily but for whom it is not their native language. Bernard Comrie, in an article for *MS Encarta Encyclopedia* of 1998, estimated the native speakers of languages by population:

Mandarin Chinese	836 million
Hindi	333 million
Spanish	332 million
English	322 million
Bengali	189 million
Arabic	186 million
Russian	170 million
Japanese	125 million
German	98 million
French	72 million

Weber (1997) offers a similar breakdown of the top languages by population but includes native speakers and nonnative speakers who use the language regularly or primarily:

Mandarin Chinese	1.12 billion
English	480 million
Spanish	320 million
Russian	285 million
French	265 million
Hindi/Urdu	250 million
Arabic	221 million
Portuguese	188 million
Bengali	185 million
Japanese	133 million

In Weber's estimates, the totals for Chinese, Arabic, and French include more than one variety.

Another interesting set of numbers (Weber 1997) is the number of countries in which the top-ranking languages are widely spoken. Here, English tops the list: English, 115; French, 35; Arabic, 24; Spanish, 20; Russian, 16; German, 9; Mandarin, 5; Portuguese, 5; Hindi/Urdu, 2; Bengali, 1; and Japanese, 1.

The prominence of English as a worldwide language is due primarily to the expansion of British colonial power in the nineteenth century and to

the emergence of the United States as the leading economic power in the twentieth century. Given a different set of historical circumstances, another language could have been as prominent as English is now; and in the future, another language could possibly become more prominent.

## Language Variation and Language Discrimination

As we have seen throughout the text, all languages and all dialects have equally systematic phonological, morphological, and syntactic rules; and all languages and all dialects have the same expressive power. Nevertheless, we allow certain dialects and languages more status than others, which has nothing to do with one variety being better linguistically but simply with a society's attitude toward the speakers of that variety. If the speakers are viewed negatively, then the dialect is viewed negatively. If the speakers are viewed positively, then the dialect is viewed positively. Why do we view certain groups in negative ways? It has to do with power: in the United States, the language or dialect of those who are poor, who are nonwhite, who do not speak English, and whom we consider uneducated is less preferred. But when we discriminate against someone based on the way he or she talks, we discriminate against that person.

We make all kinds of assumptions about each other based on the way we dress, the kind of car we drive, where we live, and how we talk. The way we talk, our dialect, is intertwined with our identity. It remains somewhat acceptable in our society to criticize people's speech—their accents, their vocabulary choice, their syntax. We can find numerous examples of people making judgments about others' speech: “[He spoke with a] working-class accent thicker than the sludge at the bottom of a can of baked beans” (Newman 2004). This discrimination is most obvious with two of the most stigmatized American dialects: Southern dialects and African American dialects (there are several subtypes of each variety). Consider the assumptions underlying this sentence from a newspaper. “For 37 years, Charles Kuralt has shown us what network news can be—calm, thoughtful, perceptive. Beneath that deceptive North Carolina drawl, there's a crisp intelligence” (*Daily Guide* 1994). The assumption is that a Southern dialect indicates that someone is likely a bit slow, not very

smart; thus, it is surprising if they are smart. Edward Ayers (1996) tells of a Virginian who attended Harvard in the early 1980s and wished he could just put a sign around his neck to stave off the questions that came up, or that he thought people were at least wondering about, when they heard him speak: “Yes, I am from the South. No, I do not know your uncle in Mobile . . . Both of my parents are, in fact, literate . . . No, I do not own slaves. No, I do not want any.” The stereotype of Southerners as uneducated, gullible slave owners continues to play out in the media, in books, and in schools. It remains quite prevalent even when recognized as unfair and untrue.

hwæt!

Stephen Colbert, host of the popular “news” show *The Colbert Report*, changed his Southern accent (he’s from Charleston, South Carolina). Why? Because he didn’t want to appear stupid?



This kind of linguistic discrimination is not easy to fix because it is connected to so many complex social issues. However, an important first step, at least, is to recognize where our attitudes about language variation and language change come from and then to contextualize them within our current culture.

## RPE 12.9

## Language Alive!

### German Goes from Good to Bad

Immigrant groups in the United States have met with various degrees of tolerance with respect to maintenance of their languages and cultures. Such tolerance depends on changing attitudes toward the people and is influenced by political and social events. For example, in the eighteenth and nineteenth centuries, German was the primary language of instruction in many schools. Language policy expert James Crawford (1996) notes that in 1839, Ohio became the first state to pass a law allowing German–English instruction when it was requested by parents. But even without authorization, many public schools throughout the East used the languages of the immigrant communities, including Czech, Danish, Dutch, Italian, Norwegian, Polish, and Swedish. However, when attitudes toward speakers of a language change, so do the policies governing that language. During World War I, public use of German was banned in many communities and even in some states. Once the most prestigious modern language, studied by one-fourth of all U.S. high school students in 1915, German was banned in most schools in the country. Historian Carl Wittke (1936) documented the burning of German textbooks sponsored by some schools.

*For more information*

Crawford, J. March 1996. Anatomy of the English-Only movement. *Conference on Language Legislation and Linguistic Rights*. University of Illinois at Urbana-Champaign. <http://ourworld.compuserve.com/homepages/jWCRAWFORD/anatomy.htm>

Wittke, C. 1936. *German-Americans and the World War: With special emphasis on Ohio's German-language press*. Columbus: Ohio State Archaeological and Historical Society.

### Standard English and “General American”

The term *Standard English* is often defined as a preferred variety of English that we all take for granted. As we saw in Chapter 11, the idea that one language variety is better than another has its roots in seventeenth-century England and is our legacy today. Given what we now know about language variation and change, let's examine the notion of Standard English in more detail.

We cannot deny the role of a standard language. Certainly, having some standard variety of English is important in teaching the language, especially to nonnative speakers of English. And certainly, having a standard written form of the language is important, too—communication problems would inevitably increase if we allowed words to be spelled in different ways and

abandoned punctuation rules. (However, such rules are typically abandoned in texting, some e-mail, chat rooms, etc., so, arguably, communication problems do not inevitably result, especially for those who are part of the group.)

We have mentioned throughout the text the pull of a standard language variety, and we will discuss this more in Chapter 13. However, we have certainly seen that no single language variety is *the* standard. There are various regional standards within the United States; what most people say in one part of the country can vary from what most people say in another part of the country. In Chapter 7 on syntax, for example, we mentioned that using more than one modal verb is quite standard in many Southern varieties: *I might should go to the store*. And the preferred words (lexical choices) vary across dialects: *bag/sack*, *wait on line/wait in line*, *knapsack/backpack*, and so on. We have also seen throughout the text, however, that other linguistic features are quite stigmatized outside the community that uses them—*ain't*, the use of double negatives (*I don't have none*), the use of certain past-tense and past-participial verb forms (*I seen him*. *She hasn't came in yet*), for example. We have also seen that all such variations are linguistically sound—they are patterned and systematic. However, they are stigmatized outside the community because of the attitudes toward the people who speak them; stigmatized dialects and dialect features are spoken only by stigmatized groups.

Some propose that we can identify a language variety called **General American**, a variety of English that is not associated with a particular city or region but rather is defined by what it *doesn't* include, namely, stigmatized features or obvious regionalisms. This variety is fairly phonologically flexible, too, and not identified with a particular accent. *R*-full dialects are typically perceived as more neutrally American than *r*-less dialects, however. General American, like Standard English, is still an idealization, and what we consider standard or mainstream is perhaps more accurately characterized as speech that one perceives as including few, if any, stigmatized forms.

**General American**  
an idealized variety of English that speakers perceive as neutral, with few stigmatized forms or regionalisms

## RPE 12.10

## Dialect Pride

Attitudes about nonstandard dialects are definitely not always negative; in fact, dialect pride is on the increase. As public awareness of dialect discrimination increases and as linguists have taken note of the importance of the disappearance of languages and dialects (discussed more in Chapter 14), we see efforts to reclaim dialects whose numbers are declining. For example, the North Carolina Language and Life Project (NCLLP) (<http://www.ncsu.edu/linguistics/ncllp/>), established by Walt Wolfram of North Carolina State University, has the following aims:

- To gather basic research information about language varieties in order to understand the nature of language variation and change.
- To document language varieties in North Carolina and beyond as they reflect varied cultural traditions.

# Language Alive!

## Urban Dictionary

The Urban Dictionary, a web-based dictionary of slang words and phrases, has at the top of its page: “The slang dictionary you wrote. Define your world.” It was started by Aaron Peckham at California Polytechnic Institute in San Luis Obispo in 1999. Anyone can submit words or phrases and their definitions, which are then edited by volunteers and rated by users. Submissions come from all over the English-speaking world. As of February 2011, 5,621,495 definitions have been submitted since the site’s founding in 1999, and the number is constantly updated. Go to <http://www.urbandictionary.com> and add your own, if you haven’t already!

- To provide information about language differences for public and educational interests.
- To use research material for the improvement of educational programs about language and culture.

According to the NCLLP’s website, some results of this work include the following:

- A growing collection of more than 1,500 recorded sociolinguistic interviews
- The development of new technologies for language analysis and preservation
- The establishment of an extensive program of community-based sociolinguistic research that includes linguistic descriptions of Outer Banks English, African American English, Southern Appalachian English, Native American English, and Hispanic English
- The production of local, statewide, and national TV documentaries on language variation in North Carolina and on particular dialects that include Outer Bank English, Appalachian English, Lumbee English, and Hispanic English
- The production of CD collections of local narratives and published trade books on particular varieties of English
- The construction of museum exhibits for local communities and for the citizens of and visitors to North Carolina
- The development of a dialect awareness curriculum for middle school students in social studies and language arts throughout the state

Such programs, resulting in increased awareness of the importance of diverse dialects, will lead to more such programs in other parts of the country.

## The Future of English Dialects

In the 1950s, when people were exposed to mass media via radio and television and began to hear the somewhat standard broadcast English, it was thought that that would be the end of English dialects. Interestingly, that has not been the case; there are just as many dialect distinctions as before the advent of radio and television, and perhaps even more.

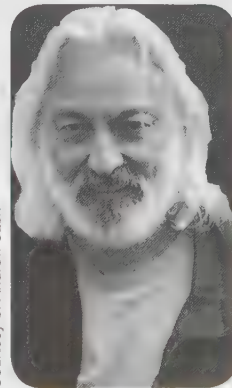
And though dialects are alive and well, sometimes we do adapt our speech to be like that of those around us, even if it is not the way we typically speak. You may have experienced social pressure to change your language. This can happen when, say, you modify your speech to match that of your peers: they say /epɹikat/ though you grew up saying /æpɹikat/, but you change the way you say it when you're with them. Why do you do this? Because the point of language is communication. Variation in language can distract from communication, so we sometimes avoid linguistic distractors and instead modify our speech to conform to those around us.

Throughout this book, we have seen ways in which our attitudes about language are not linguistically determined but socially determined. That is, there is nothing linguistically better or worse about any linguistic form or construction, but the social positions of various groups in our society mean that their language varieties share that same social position. It's all about power.

### Accent on Dialect Coaches

Have you seen these films: *Snatch* starring Brad Pitt, *Sophie's Choice* starring Meryl Streep, *The Deer Hunter* with Meryl Streep, and *The Lord of the Rings*? How did Brad Pitt, who was raised in Missouri, learn the dialect of Irish traveler Mickey O'Neil? How did accent chameleon Meryl Streep so convincingly portray Sophie, a Polish Jew escaping the Nazis, and Linda, from a working-class family in western Pennsylvania? And who taught all those *Lord of the Rings* actors to speak in Middle-Earth accents? The photo shows dialect coach Andrew Jack, who coached Elijah Wood in *The Lord of the Rings*.

Though we may take them for granted, accents and dialects in film and on stage are as important in shaping a character as costumes, sets, and lighting. And the wrong



Courtesy of Andrew Jack

accent or dialect can be distracting—it's very important to get it right. And that's the job of the dialect coach.

(continued)



Dialect coaches were originally dialogue coaches, experts who helped actors make the transition from silent movies to “talkies.” Today, they are everything from dialogue coaches (how to learn and deliver your lines) to voice teachers (working on breath, sound, tone) to experts on accent and dialect. Their training varies as much as their jobs, but most are trained as actors, some have professional training in speech and voice, and much of their training is also on the job.

Not all dialect coaches confine their work to training actors. Sam Chwat, “speech therapist to the stars,” specializes in helping clients (actors, but also many corporate clients) “eliminate” their accents and learn Standard American English. Chwat defines SAE as an accent and, more specifically, “‘the accent without an accent,’ . . . which does not distract the listener with, or reveal any, regionalisms. It comprises forty-four vowels and consonants, many of which do not occur in non-English languages.”

Sam Chwat’s Speech Center employs state-licensed speech–language therapists with at minimum a master’s degree in speech–language pathology. The center is responsible for teaching Julia Roberts, from Smyrna, Georgia, and Andie McDowell, from Gaffney, South Carolina, to eliminate their Southern accents.

Dialect coaches are aware that language changes, and though many teach American Theatre Standard (ATS), there is some controversy over whether this variety accurately reflects mainstream American English. A similar debate arises in Britain with Received Pronunciation (RP), long assumed to be the standard accent for British English (and spoken by such actors as Dame Judi Dench and Jeremy Irons). The status of RP is waning, and regional accents are considered more and more standard.

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## Summary

In this chapter, we’ve explored how language is changing right before our eyes (and ears); we’ve learned that wherever there are speech communities, there are different language varieties. Different varieties of a single language, or dialect, arise for a number of different reasons; in the United States, dialects of British English imported to the eastern seaboard shifted and changed to become uniquely American. English traveled across the country with European settlers, and regional dialects of American English emerged—dialects that are shifting and changing all the time. We’ve also seen that dialects can be influenced by a number of factors other than geography.

Race, ethnicity, social networks, communities in which we live, work, and play—these all shape our language and our language identity. Our attitudes about language and dialect lead to language variation and also to language discrimination. Judgments about language are really judgments about the people who speak them, and knowing more about the natural inevitability of language change and variation may lead to less stereotypical attitudes about good and bad language, what is standard or not, and may also lead us to take a livelier interest in the richness and diversity of language around us.

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## Review, Practice, and Explore

### RPE 12.1 British versus American English

Conduct some research to find at least five ways in which British English and American English differ. Give examples from vocabulary, pronunciation, and syntax.

### RPE 12.2 Explore a Dialect

Research an American dialect of your choice. Provide at least five examples of vocabulary, pronunciation, and syntax unique to this dialect. Trace its history; is it a regional, social, or ethnic dialect, or something else entirely? Who speaks this dialect and where? What factors led the variety to develop its unique characteristics? Among the many dialects you may want to consider are General Southern, Midland, Upper Midwest, West, Pacific Northwest, and Canadian.

### RPE 12.3 Recent Borrowings

Look up the etymologies of at least six of the following words in a good etymological dictionary (*The Online Etymological Dictionary*, *The Oxford English Dictionary*), and determine from what language the word was borrowed, when it was borrowed, and whether the meaning has changed since the borrowing. Where possible, determine what historical, political, social, and/or geographical factors led to the borrowing of the word. Also note spelling or pronunciation differences from the original language.

slalom, caravan, jitters, gingham, ketchup, chess, shampoo, icon, klutz, bum, studio, spool, waffle, mosquito, bigot

### RPE 12.4 Etymologies of Place-Names

Choose five place-names in your state and research their origins, including the language of origin and the meaning.

### RPE 12.5 The Ebonics Controversy

What was the 1996–1997 Ebonics controversy, and who was involved? What was the Oakland school board's intent, and what factors contributed to the media frenzy? Do you think this controversy could have been avoided? How would knowledge of language variation have played a role?

### RPE 12.6 Research an Ethnic Dialect

Ethnic dialects arise for a variety of reasons, chief among them social isolation and cultural identity. Research an ethnic dialect of your choice. Where did the dialect originate and why? What are some of its grammatical features? Why would you say this is an *ethnic* dialect rather than a regional one? (Some ideas: Pacheco, Cajun, New York Jewish.)



**RPE 12.7** Language Stereotypes on Television

TV cartoons are a good place to look for the use of dialect as a way to build character. Watch some cartoons (*Looney Tunes*, *South Park*, *The Simpsons*), and pay attention to the use of language. Consider who speaks foreign-accented English, who speaks a nonstandard American dialect, who speaks British English, and so forth. Is the use of language appropriate? Is it fair? Is it discriminatory? Is it simply a shortcut to typify a character so that the audience can make assumptions? Compare cartoons aimed at children and adults. Provide an overview of your research and your reflections on it.

**RPE 12.8** Global Varieties of English

Research a global variety of English (spoken in a region other than the United States, Canada, or the United Kingdom). What is its history, and what are some unique features of the variety? Choose from the varieties discussed in the chapter, and go into more depth (East Indian English, Caribbean English, South African English, Singapore English) or branch out; what about Barbadian English or Jamaican English? There are many others to choose from.

**RPE 12.9** Is Your English “Pleasant”?

Do the exercise on language attitudes found at <http://www.pbs.org/speak/speech/mapping/map.html>.

Linguist Dennis Preston researches people’s attitudes toward dialects of American English. In this exercise, you’ll determine whether various pronunciations from around the world are “correct” or “pleasant.” Summarize your reactions to the exercise and to the other information linked there.

**RPE 12.10** Your Version of General American?

Here are some sentences from different American English dialects. Which are familiar to you? Do you think these are features of General American? If not, why not? Compare your answers with your classmates’ answers. Do you all agree on what is considered General American? If you don’t, can you explain why?

- a. I’m really liking the new house.
- b. It’s fixin’ to rain.
- c. So she’s like “when will we get there?”
- d. They answered wrong.
- e. I wonder who all will be there.
- f. The bullet went clean through the door.
- g. Y’all better get some sleep.
- h. Youse better get some sleep.
- i. I like those ones over there.

## Chapter at a Glance

## A Brief History of Writing

Logograms and Phonograms  
Alphabets

## The Development of English Spelling

Old English Writing and Spelling  
Middle English Spelling  
Toward Modern English Spelling  
Attempts at Spelling Reform

## The Development of English Punctuation

Early Punctuation  
Modern Punctuation  
Punctuation "Errors"

## Writing Rules, Standardization, and Authority

The Power of the Dictionary  
Writing Registers and Forms  
Electronic English  
Written Standards in Flux  
The Effects of Print

## Summary

## Sources and Resources

## Review, Practice, and Explore



# Representing Language: The Written Word

## Key Concepts

- Only 25 percent of the world's languages have written forms.
- There are a great many differences between written and spoken language.
- Humans have created writing systems based on phonemes, on syllables, and on meaning.
- The English spelling system is only partially phonetic; its nonphonetic features reflect a great deal about the history of the language.
- The spelling conventions of English influence language acquisition in our highly literate society.
- Written language plays a large role in the standardization of language.

## Did You Know . . . ?

Hieroglyphics  
Cuneiform  
Autocorrect Isn't Always  
The Oxford English Dictionary

## Language Alive! Ye Olde Confusion

Smileys  
Are You Ever Alright?

## Linguistics in the News The CSIs of Language

## Accent on Copy Editors

*Words, once they are printed, have a life of their own.*

—CAROL BURNETT

**T**hink about your world without printed words. No signs, libraries, e-mail, research papers to write; no movie tickets, road maps, recipes, textbooks, birth certificates, words on cereal boxes. Even names for things are based on writing: *S-curve*, *T-shirt*, *A-list*. In Western culture, print is everywhere. In fact, print is so pervasive in our lives that you might not even think of oral language and written language as different. One big difference, however, is that oral (or signed) language comes without instruction—it's part of what makes us human, as we've discussed throughout this book, but writing is a human invention. Linguists have estimated that only 25 percent of the world's languages have written forms.

We begin our discussion of the graphic representation of language with a look at a variety of writing systems that humans have created over time, including systems based on phonemes, systems based on syllables, and ideographic systems based on meaning, among others. Also, we will explore the English spelling system in some detail to see what it tells us about the history of the language and how spelling influences language acquisition in a highly literate society. We will then discuss some of the differences between writing and speech and how writing is similar to but also distinct from speech. Throughout the chapter, we will reflect on the issue of authority in language and the role of writing in language standardization.

## A Brief History of Writing

When linguists talk about and study language, they typically mean the study of spoken language. This is the form of language that emerges naturally; as we've seen, children acquire spoken (or signed) language without instruction simply by being exposed to it. Writing and reading, however, must be taught. From this perspective, writing is a secondary form of language based on the spoken version.

Writing is a fairly recent invention. We really don't know when people started speaking (estimates range from somewhere between 50,000 and 100,000 years ago; we will return to this question in the next chapter), but we have a fairly good idea of when people started making conventionalized marking on stone, wood, clay, metal, parchment, and paper to symbolize their speech. The invention of the first writing system is believed to have been around the fourth millennium BCE.

This pictogram clearly warns of the danger of crushing fingers in the gears.



Clipart.com

**logogram/ logograph** symbol that represents a word or a morpheme

**pictogram** pictures or symbols that represent an object or idea

**ideogram** symbol that represents an idea

**phonogram** symbol based on sound

**syllabary** system of writing based on syllable sounds

## Logograms and Phonograms

The two broad systems of writing languages are logographic and phonographic. A **logogram**, or **logograph**, is a symbol that represents a word or a morpheme. Two subtypes of logographic systems, for which there is some degree of overlap, are *ideograms* and *pictograms*. **Pictograms** are pictures or symbols that represent an object or idea and may communicate a message, but they are not direct representations of speech. The pictogram to the left depicts the result of fingers getting caught in some gears in a very direct way (ouch!).

**Ideograms** (from Greek *idea* 'idea' and *grapho* 'to write') are symbols that communicate or represent an idea, though they are not necessarily pictures of actual objects or events. When a picture becomes conventionalized, it may be an ideogram, like the peace sign. Pictograms and ideograms are often used in public places where people speak many languages.

Pictograms and ideograms are not complete writing systems for any language because they are unable to represent all aspects of a language. Rather, all writing systems that fully represent the language are partly or completely phonemic; this makes sense since writing systems represent language, and (spoken) language is composed of sounds. Some systems, however, also have characters based on meaning rather than sound.

As its name suggests, a **phonogram** is a symbol based on sound rather than meaning. Phonographic systems include **syllabaries**, based on syllables,

### Did You Know...?



#### Hieroglyphics

The key to deciphering Egyptian hieroglyphics came in 1799 with the discovery of the Rosetta Stone by French soldiers (near the city of Rosetta near the Nile River). The stone had three languages on it. One was Greek, which they could read, and the other two were hieroglyphic forms of Egyptian languages. After twenty years of trying to break the code, French Egyptologist Jean-François Champollion, building on work by Briton Thomas Young, discovered that the characters stood for sounds, making it a phonographic system rather than a purely logographic one as had been assumed.

*For more information*

The British Museum. [http://www.britishmuseum.org/search\\_results.aspx?searchText=hieroglyphics](http://www.britishmuseum.org/search_results.aspx?searchText=hieroglyphics)



**alphabet** system of writing based on individual sounds

and **alphabets**, based on sounds. Such systems do not represent meaning directly but instead represent the sounds in the spoken language. Some languages that use syllabaries are Cherokee (developed by Sequoyah), Japanese, Ojibwe, Blackfoot, Cree, and Mende. A lot of other languages use an alphabetic system, and we take a look at a variety of related alphabetic systems here.

An important syllabary is that developed by Sequoyah, a Cherokee chief, in the early part of the nineteenth century. After Sequoyah developed the syllabary, he spent the rest of his life teaching people to read and write in the language. In 1828, the first issue of the newspaper *Tsa la gi Tsu lehisununhi*, meaning ‘Cherokee Phoenix’, was printed in both Cherokee and English. It was the first Indian newspaper ever published.

### RPE 13.1

### Did You Know...?



#### Cuneiform

Cuneiform (from Latin *cuneus*, meaning ‘wedge’, as the symbols were wedge-shaped) is one of the earliest known examples of writing, created by the Sumerians maybe as long ago as 3400 BCE. It began as a pictographic system and gradually became more abstract. It was used throughout Mesopotamia for thousands of years by the Akkadians, the Elamites, the Assyrians, and the Hittites to write their own languages; it evolved to become more like an alphabet or a syllabary in some systems while retaining logographic characteristics in most systems. Cuneiform was also used to write Aramaic (an endangered Semitic language formerly widespread in the Middle East and believed to be the language that Jesus spoke) but was later replaced by the Aramaic alphabet.

## Alphabets

In alphabetic systems, each symbol represents a sound. Most scholars believe that the first writing system was the Sumerian script, a cuneiform which formed the basis of all alphabetic writing. Sumerian script was gradually replaced by the Phoenician alphabet, a consonantal system, or *abjad*. Semitic writing today (for example, the Arabic and Hebrew writing systems) still represent consonant sounds only (for the most part). The Phoenician system had certain consonantal sounds not found in other languages, and when Greeks adopted the system, these symbols were used to represent vowels. The Phoenician system is therefore the ancestor of both Semitic writing systems (Arabic and Hebrew) and the Greek system, which in turn is the ancestor of the Latin, Cyrillic, and Coptic systems.

The Greeks even used the Semitic names of the symbols, which they adapted to Greek phonetic patterns; so *aleph* ‘ox’ and *beth*

### hwæt!

*Nushu* ‘woman’s writing,’ is a Chinese writing system developed and used exclusively by women in a remote corner of Hunan province. The only known system of its kind, it is no longer in use since the last woman proficient in the system died in 2004.

‘house’ became *alpha* and *beta* because words ending in consonants (other than *n*, *r*, and *s*) do not follow Greek syllable structure, which is primarily consonant–vowel (CV) syllables. The forms of the Greek letters changed somewhat over time, and the Romans introduced other changes when they borrowed the Greek alphabet to write Latin.

The Slavic Russians, Bulgarians, and Serbs were Christianized by the Eastern Greek Orthodox Church, whose members spoke Greek. These Slavic groups borrowed their alphabet, called Cyrillic, from Greek in the ninth century. Those Slavs whose Christianity stems from Rome—the Poles, the Czechs, the Slovaks, the Croats, and the Slovenians—use the Roman alphabet. Other alphabetic systems include Arabic and the Brahmi system of scripts, the ancestor of those systems of Southeast Asia as well as the ancestor of the Arabic numerals now used all over the world.

Chinese, though often described as logographic, uses a combination of systems. Every Chinese word originally had a symbol based not on the phonetic structure of the word but on its meaning. The symbol 山 is the Chinese character for *mountain*. Though you can perhaps see the resemblance between the symbol and an actual mountain, it would be difficult to determine the meaning from the character.

hwæt!

Serbian, Croatian, Bosnian, and Montenegrin are all really based on the same language, which used to be referred to as Serbo-Croatian, the official language of the former Yugoslavia.

RPE 13.2

## The Development of English Spelling

We discuss here some of the kinds of changes in the written language that have taken place in English over the last 1,300 years or so. We will explore the changes through the three traditional historical periods of the language: Old English, Middle English, and Early Modern English. The changes in the written language have slowed since the written language has become more standardized, but change is still taking place. A host of reasons exist for the seemingly chaotic spelling system of English. When you understand the history of writing and spelling, the current spelling system, with all its seeming idiosyncrasies, makes a great deal more sense.

### Old English Writing and Spelling

In the early Middle Ages, various script styles developed in lands that had been provinces of the Roman Empire. The Romans invaded the Celtic peoples living in what later became the British Isles in the first century BCE and stayed approximately until the fifth century BCE. The Romans introduced Latin writing and therefore the Latin alphabet; both all but disappeared when the Romans left. As you know from Chapter 11 on the history of English, Germanic invaders arrived in the late fifth century after the Romans had departed. These Germanic invaders were largely illiterate, and any writing

# Language Alive!

## Ye Olde Confusion

The shape of the thorn, þ, grew less and less distinctive, with the letter losing the top part and therefore looking more like the wynn, <ƿ>, which had fallen out of use by about 1300 (perhaps due to the influence of French, which did not use that letter); instead, <w> was used. The handwritten thorn, then, became fairly indistinguishable from the letter <y>, and so *the* and *ye*, for example, began to look very much alike. Sometimes scribes would place a dot over the y to distinguish it from the thorn, but when they didn't, these symbols were sometimes confused. So all those quaint shops whose names begin with "Ye Olde" are based on a mixup!

was rare, but when they did write their language (as it was at that time, both in the British Isles and back on the continent), they used a system clearly related to and derived from the Latin alphabet. This alphabet, called the *futhorc* or *futhark* (see the "Did You Know . . . ?" box on page 377), consisted originally of twenty-four letters; between five and nine letters were added during the early Old English period. The letters are angular, likely due to the fact that they were made by cutting or scratching into wood or stone.

Several of the runic letters were used throughout the Old English period: the æ, called *ash*; the ð, called *eth*; the þ, called *thorn*; the ƿ, called *wynn*; and the ȝ, called *yogh*.

In Old English, more words were spelled as they were pronounced than in Present-Day English. For example, the initial "silent" letters in words now spelled with <kn>, <gn>, and <wr> were all pronounced in Old English (*cneow*, 'knee', *gnæt* 'gnat', and *wræcca* 'wretch'). Both vowels were pronounced in combinations such as <eo> (*feohtan* 'fight') and <ea> (*eald* 'old'). Old English also had variable spellings: the letter <c> was pronounced [k] before back vowels (*carfulnes* 'anxiety') but as [č] before front vowels (*cild* 'child'). Old English books were written on vellum, or sheets of carefully prepared calfskin. Most of the letter forms were different from their current forms. An Old English text called *Sermo Lupi ad Anglos* (*The Sermon of the Wolf to the English*), written about 1050, toward the end of the Old English period, can be viewed at Melissa Bernstein Ser's site:

<http://english3.fsu.edu/~wulfstan/noframes.html>. (Though the title is Latin, still regarded as a "superior" language by many writers, the work is written in Old English.) You can also take a look at a great many Old English texts at

"Knot Just Yarn"





## RPE 13.3

the Labyrinth Library collection from Georgetown University: <http://www8.georgetown.edu/departments/medieval/labyrinth/library/oe/oe.html>.

## Middle English Spelling

The Norman Conquest of England in 1066 brought influence from French (and Latin) to the language. A great many words were added from French (as discussed in Chapter 11), and French-speaking scribes introduced a number of spelling changes into English. For example, the French letters <j> and <v> were introduced into English, alternating with <i> and <u>; so, for example, *time* could show up spelled as *tijm* or *tiim*, and *judge* could be *iuge* or *juge*. Also, the letters <q> and <z> were borrowed from French, so the Old English letter combination <cw> gave way to <qu> (*cwen* became *quene* ‘queen’). Now, it would be much handier for kids learning to spell to have that old <cw> back! There was a greater tendency to match spelling to sound; for example, <z> was often used in plurals when the sound was voiced, so a word like *days* was written *daiz*. Also due to French, the letter <c> came to be pronounced [s] (rather than [k] as it had been in Old English) in some words borrowed from French, such as *city* and *cellar*, and then even spread to such native Old English words as *lice* and *mice*. The letter <k> replaced Old English <c> before high and mid vowels (*keen*, *kiss*), but <c> was retained before low vowels and consonants (*cat*, *cool*, *cut*, *clean*). Old English long vowel [ū] came to be spelled <ou> or <ow>: *hus* became *house*, and *hu* became *how*. And on and on.

Sometimes, spelling changes were introduced in order to distinguish letters that looked quite similar in the old slanting script. The up and down pen strokes used by the scribes, called *minims*, could be difficult to distinguish, so the scribes would simply change the letters. For example, several words spelled with <u> in Old English, such as *lufian* ‘love’ and *cumin* ‘come’, were spelled with <o> in Middle English since <u> was difficult to distinguish from the pen strokes of the neighboring <f> and <m>, respectively. This also happened with the words *monk* (Old English *munuc*), *some* (Old English *sum*), and *worm* (Old English *wurm* and *wyrm*).

The letter *yogh*, <ȝ>, was replaced in Middle English by the French <g>, and words spelled with <hw> were mostly switched to <wh> in the spelling: *where*, *when*, *why*, *what*. The pronunciation remained /hw/ for many speakers, but this pronunciation is being lost (as discussed in Chapter 3). And note the pronunciation of the other *wh*- word *who*: /hu/, while *how* is both spelled and pronounced with /h/, though both of these words used to be spelled and pronounced with /hw/ in Old English.

hwæt!

Johannes Gutenberg was a German goldsmith who invented movable type and thus mechanized printing in 1439.

## Toward Modern English Spelling

William Caxton, who introduced the printing press to England in 1476, and other early printers are responsible for many spelling idiosyncrasies. Sometimes, they would simply change the spelling



of a word to make it fit on a line. During Caxton's time, not a great deal of attention was paid to consistency of spelling; Caxton, for example, spelled one word several ways within the same text.

Sometimes, printers and scribes inserted letters in words to reflect the origin of a word. Renaissance scholars, obsessed with the ideas and traditions of ancient Greece and Rome and hoping to bolster the reputation of English as a worthy language, altered words' spellings to reflect their Latin origins. For example, English got the word *debt* via French *dette*. However, it had originally come from Latin *debere* 'to owe', so the <b> was inserted into the English spelling sometime after 1400. The King James Bible (from the early seventeenth century) has *detter* three times, *debter* three times, *debtor* twice, and *debtour* once. Sometimes the respellings had no effect on pronunciation, as in the <b> in *debt* and *doubt* or the <c> in *indict* (which came to English via French *enditer* but was respelled with the <c> — "re-Latinized"—around 1600). Other times, the new spelling did alter pronunciation such that the modern spelling and pronunciation correspond; for example, *adventure* came from Middle English *aventure*, but the <d> (from Latin *aduentas*) was reinserted in spelling and later in speech. Similarly for *falcon*, which came to English from French *faucon* but Latin *falco*; the [l] was not originally pronounced but was reinserted to Latinize the word and is in most speakers' pronunciations of the word now.

The pronunciation of [l] before another consonant is in quite a state of flux. Consider the letter <l> in such words as *half*, *calf*, *walk*, *salmon*, *palm*, *folk*, *wolf*, *talk*. This [l] before a consonant had disappeared in pronunciation across the board by Early Modern English (1500–1800). However, the [l] has returned in certain words for certain speakers due to spelling pronunciations. Another spelling pronunciation is the [t] in the word *often*. It went unpronounced for several hundred years, but speakers have begun to pronounce it more frequently, and it is becoming a standard pronunciation, mentioned in many dictionaries as an alternative pronunciation.

In some cases, we find "incorrect" Latin spellings based on what are called false etymologies. A well-known example is the word *island*, from Old English *igland* and related cognate *ealand*, meaning 'water-land'. The <s> was inserted in the fifteenth century because scholars thought the word was related to the similar but unrelated word *isle*, which came from the Latin word *insula*.

Sometimes spellings were changed to make them match words that were pronounced similarly but had distinct origins. For example, words spelled with <gh>, such as *light* and *knight*, had the uvular fricative [x] in Old English, which eventually dropped out of the language, and <gh> in some words (but not others, such as *enough* and *rough*) became silent. *Delite*, spelled as such until the sixteenth century, was respelled *delight* by analogy with similarly pronounced words.

hwæt!

What about *Bratz* dolls? Why the <z>? This is not a spelling pronunciation, but it does capture your attention, which is probably the point!

# hwæt!

Ever wonder why we pronounce the names of the famous authors William Butler Yeats and John Keats differently? Yeats was Irish (where there was no Great Vowel Shift) but Keats was English, as his name reflects.

Another major effect on our modern spelling system was the Great Vowel Shift. Recall from Chapter 3 that at the tail end of the Middle English period, sometime between 1400 and 1600, the seven tense vowels of English shifted to become seven different vowels for most speakers of English. The primary reason that we know this shift occurred is that it greatly affected our spelling system. When Caxton introduced the printing press to England and began to print books, a gradual standardization process began that continued steadily over the next hundred years or so (and does still, but at a much slower rate). This standardization process had begun before the vowel shift was complete; thus, many of our spellings represent pre–Great Vowel Shift pronunciation. For instance, words such as *cheat*, *plead*, *wreath*, and *leaf* all used to be pronounced with [e], but shifted to [i] as a result of the Great Vowel Shift. Perhaps because of dialectal variation, not all words with this pronunciation shifted; we still have *threat*, *head*, *death*, and *deaf*. And what about *break*, *steak*, and *great*? Here, [e] shifted to [e] but didn’t shift all the way to [i].

We can see that although the English spelling is often characterized as chaotic and rife with irregular patterns, an investigation of the many patterns in English spelling and of the history of individual words provides important insights into the nature of sound change, word origins, the effects of print on pronunciation, and a wealth of examples of language change at work.

The introduction of the printing press and the first English dictionaries that soon followed resulted in fairly rapid standardization of spelling. By about the mid-sixteenth century—only one hundred years after the introduction of the printing press to England—many of the features of current spelling were established. Prior to that, printers, scribes, and other literate people spelled as they spoke, using various methods and various dialects.

## RPE 13.4

## Attempts at Spelling Reform

Numerous attempts have been made to alter the English spelling system, beginning in the eighteenth century and continuing up to the present, with The Simplified Spelling Society, based in the United Kingdom, founded in 1908.

Samuel Johnson’s *Dictionary of the English Language*, published in 1755, is often called the first English dictionary, though it had several predecessors. Johnson’s dictionary, however, became the authority for spelling and was fairly widely accepted as the definitive source. Across the Atlantic, Benjamin Franklin began to create a new phonetically based English writing and spelling system in the late 1700s. Franklin’s system got rid of some letters and added new ones. It never gained any ground but seemed to spur Noah Webster’s interest in a new, uniquely American spelling system. Webster (1789: 41) proposed the removal of all silent letters and regularization of certain other common sounds. So, *give* would be *giv*, *built* would be *bilt*,

*speak* would be *speek*, and *key* would be *kee*. Though these suggestions obviously didn't take hold, many of Webster's American English spellings did: *colour* → *color*, *honour* → *honor*, *defence* → *defense*, *draught* → *draft*, and *plough* → *plow*, to name a few.

Melville Dewey was another American interested in spelling reform. In 1876, he created the Spelling Reform Association and dedicated himself not only to spelling reform but also to a new system for cataloguing library collections. The cataloguing worked; the spelling reform did not.

In 1897, the National Education Association came up with new spellings for twelve words: *catalog*, *decalog*, *demagog*, *pedagog*, *prolog*, *program*, *tho*, *although*, *thoro*, *thorofare*, *thru*, and *throughout*. Only a few of these remain with us.

The American Simplified Spelling Board, founded in 1906, proposed a list of 300 newly spelled words. Andrew Carnegie supported the Simplified Spelling Board both philosophically and financially, and President Theodore

Roosevelt was very much in favor of its suggestions. However, Roosevelt's successor, President William Howard Taft, was less enthusiastic. Carnegie's death and the resultant lack of funding also slowed the spelling reform movement, though it enjoyed a brief resurgence in the 1930s when a Swedish philologist, R. E. Zachrisson, proposed a new spelling system called Anglic. This system never got off the ground, due to World War II and Zachrisson's death. The following is a portion of Lincoln's Gettysburg Address in Zachrisson's Anglic:

Forskor and sevn yearz agoe our faadherz braut forth on this kontinent a nue naeshon, konseevd in liberti, and dedikaeted to the propozishon that aul men ar kreaeted eequel.

When the playwright George Bernard Shaw died in 1950, his will provided for the development of a new alphabet and spelling system for English. Quite a bit of his fortune was spent on inventing and promoting what came to be called the Shaw, or Shavian, Alphabet, a system developed by Kingsley Read, a typographer who won the contest held by the trustees of Shaw's estate to develop the best system. The Shaw Alphabet is phonemic, with each symbol representing a unique sound. The fact that you have likely never even heard of this alphabet, much less used it, is a clue to the success—or lack thereof—of Shaw's dream. (However, you can find lots of links to the Shavian alphabet, including <http://www.shawalphabet.com/index1.html>, <http://www.omniglot.com/writing/shavian.htm> and <http://www.spellingsociety.org/journals/j31/shawbett.php>.)

The spelling reform movement is still alive and well, concentrated in the Simplified Spelling Society. Its goals are “to raise awareness of the problems caused by the irregularity of English spelling and to promote remedies to improve literacy, including spelling reform” (Bett 2002). It is not likely

## hwæt!

Divergent spelling is the deliberate spelling of a word in a nonstandard way. It's often used in product and brand names: Krispy Kreme, Froot Loops, Bi-O-Kleen.



LINGUISTICS  
IN THE NEWS

## The CSIs of Language

In the late 2000s, a forensic linguist, Tim Grant, appeared on the BBC News Channel and spoke about his evidence in a case involving a terrorist suspect in the United Kingdom. He had sifted through piles of documents, comparing them to other pieces that the suspect, Dhiren Barot, was known to have written. Grant compared consistent spelling and grammatical variations to see if it was likely that the suspect had written the papers. He found that it was indeed likely, and that evidence contributed to the decision to charge Barot with

the crime. Barot pleaded guilty in 2006 to conspiracy to murder and was sentenced to at least forty years in jail.

Forensic linguists were also essential in the capture of the Unabomber, Theodore Kaczynski. His brother first recognized his writing style, and linguists then corroborated that the Unabomber's threat letters contained many words and phrases common in Kaczynski's known writings.

Forensic linguists provide expert evaluations of written items (whether on paper or onscreen) involving murders, kidnappings,

fraud, and other crimes. Sometimes, their expertise is so critical to a legal case that they are called upon to testify in court.

*For more information*

Edwards, K. 2008. Reading between the lines. *BBC News*. May 23. [http://news.bbc.co.uk/1/hi/england/west\\_midlands/7411388.stm](http://news.bbc.co.uk/1/hi/england/west_midlands/7411388.stm)

Zimmer, B. 2006. Forensic linguistics, the Unabomber, and the etymological fallacy. *Language Log*. January 14. <http://itre.cis.upenn.edu/~myl/languagelog/archives/002762.html>

ever to have more than minor success in fulfilling its aims, however. The logical, practical, and social reasons for maintaining our current spelling system are numerous. Here are some of them:

- Language continues to change, so whatever spelling system is introduced will have to continue to adapt to the spoken language.
- What system would be used?
- What dialect would be followed?
- Would kids learn both the old and the new systems (to be able to read pre-spelling reform literature and documents)?

Some countries, including Germany, Japan, Ireland, and Norway, have introduced spelling reforms that have been fairly successful.

Any spelling reform that attempted to create a closer match between sound and symbol would perhaps result in children having an easier time decoding text; however, a great deal of semantic information, which is obviously an extremely important piece of literacy, would be lost. Consider words that share a root but have distinct pronunciations—how would spelling reform affect such word groups?

RPE 13.5

sign	signal, signature
bomb	bombard
hymn	hymnal
part	partial

logic	logician
reduce	reduction
design	designation
critical	criticize, criticism

RPE 13.6



## The Development of English Punctuation

hwæt!

Frustrated by his own inability to write (though he could read), the Emperor Charlemagne is credited with initiating many reforms in the written system, including placing a space between letters, a bigger space between words, and an even bigger one between sentences.

As any child in the U.S. school system knows, writing involves much more than learning the alphabet and the spellings of words. Along with learning how to spell, English-speaking children also learn how to arrange words on the page—from left to right with spaces between words. Sentences begin with a capital letter and end with a period, and shifts in topic are indicated by indenting the first word of a new paragraph. Though this system may seem completely logical to those of us who are familiar with it, it has been in use in English writing only since about the seventeenth century. Here, we will explore a bit of the history of punctuation. We will also see that some features of written English reflect features of oral language (helping us read written language out loud), but others perform a different purpose, and rather than reflecting grammatical features of oral language, they are part of the “grammar” of writing.

### Early Punctuation

Early punctuation was related more closely to speaking than to reading. Latin texts were originally written without spaces between words. Punctuation marks began as a guide to reading texts aloud, and word spaces were finally introduced around the eighth century BCE. Early Old English texts needed marks to indicate when the speaker should pause to give emphasis or indications or to breathe. In elementary school, punctuation is still often taught by asking students to think of how a sentence is spoken; children are taught, for example, to put commas where they would pause (though this can also lead to what are considered “errors,” such as separating two clauses with a comma rather than a period). Because Old English texts were handwritten and because there were not yet standards for punctuation, it is not surprising that there is great variability in the punctuation used; some used no punctuation at all. Most scribes used the *point* (a period) to mark a rhetorical break of some kind or a suggestion for where to breathe when reading aloud. Points were written on the line or above the line. Semicolons indicated longer breaks, and *punctus elevatus*, something like our modern comma, marked a shorter break. Question marks (*punctus interrogativus*) were sometimes used, but not required, in questions.

Spaces occurred between words in compounds, between prefixes and suffixes and the roots or words to which they were attached, and sometimes between syllables. Prepositions, pronouns, and adverbs were typically attached to following words, and word breaks at the end of a line were

often at syllable breaks, sometimes marked with a hyphen, sometimes not. Proper names were not capitalized, and although some scribes capitalized the first letter of the word beginning a sentence, not all did. Nouns were often written with the determiners and prepositions with which they formed constituents, with no spaces between the words.

Middle English punctuation is similarly sparse; a point or period sometimes appears but not necessarily to mark the end of a sentence, and there is some use of hyphens to mark the breaking of a word at the end of a line. Question marks are not consistently used, and neither are commas. Comma use becomes much more consistent during the Early Modern English period (1500–1700) but capitalization is still inconsistent; most other modern marks of punctuation (apostrophes, semicolons, and contracted spellings) appear during this period, though they are used somewhat differently than we use them today.

## Modern Punctuation

Although the rules of English punctuation were pretty much established by the end of the eighteenth century, they are still not fixed. After the invention of printing, punctuation conventions came to be associated more with grammatical structure than with sound, though some current punctuation is based on phonological aspects of language. We place a period at the end of an independent clause, a syntactic unit. A period can also suggest an intonational pause when reading text aloud. A comma can also suggest a pause and, more often, a certain intonational contour, such as the one we find separating the subordinating prepositional phrase *before he goes to bed* from the main clause *Joshua always brushes his teeth* when a sentence like the following is read aloud:

Before he goes to bed, Joshua always brushes his teeth.

Other punctuation marks are based on grammatical information and do not reflect aspects of oral language. Hyphens in words like *mother-in-law* mark the morphological boundaries between words in a compound, for example, but these punctuation marks tell us nothing about intonation (indeed, the rules for hyphen placement in compounds are quite inconsistent, and many compounds have no hyphens at all: *houseboat*, *highjack*, *uptick*). Other punctuation is useful only to indicate something specific to the conventions of writing. For example, we might use capital letters in a sign to catch shoppers' attention:

SHOE SALE TODAY

Alternatively, we might capitalize letters to indicate word stress:

I said you should bring a COAT, not a GOAT!

## hwæt!

The Coop is the campus bookstore serving Harvard and MIT in Cambridge, Massachusetts. It was originally the Harvard Cooperative Society, founded in 1882 by students to supply books and other materials (including coal and wood) to college students.

Sometimes we use punctuation to prevent misreading or mispronouncing of words. An example of this is words in which a prefix that attaches to a root morpheme might lead to mispronunciation: *co-op*, *re-evaluate*, *re-examine*. Usually a hyphen is used to separate the prefix from the root, though some editors or publishing companies use other techniques: *The New Yorker* magazine, for example, uses a diaeresis (¨) over the second vowel, indicating that two adjacent vowels are in separate syllables: *coöp*, *reëvalu-ate*; elsewhere, it is written with no hyphen or diaeresis, letting the context suggest the appropriate word and pronunciation: *coop*, *reevaluate*.

Though change in punctuation rules tends to be slower than other changes in our written system, some are in flux. For example, the use of apostrophes is definitely in a state of transition, though their use has been quite varied since they began to be used in the seventeenth century. Apostrophes set off the -s morpheme in possessives:

Alicia's Bridal Shop

We also commonly see, especially in signage:

Alicias Bridal Shop

Apostrophes are also commonly used to mark plurals in what is known as the “greengrocer’s apostrophe” because it is used frequently on grocery store signs:

plum’s \$1.29/lb.

Apostrophes are also commonly used to mark plural proper names (on a mailbox or in an address):

The Jones’      The Talbot’s

Using an apostrophe to mark a plural is typically considered an error, and although such errors enjoy a lot of popular press time (the *New York Times* bestseller *Eats, Shoots and Leaves* is a screed of just such punctuation errors), most of them are founded on a certain amount of linguistic logic and are not just laziness. It is now considered standard to use apostrophes in plural acronyms and in dates:

CD’s, DVD’s, 1900’s, 1000’s of years

There is also inconsistency in rules of apostrophe use, particularly in possessives with names ending in <s>:

James’ car      James’s car

We can also use apostrophes to mark plurals in possessives:

The Jones’ car      the Jones’s car

So perhaps it's no wonder that apostrophes are used more and more to mark plurals as well as possessives, both of which involve the affix -s. And what about *its* and *it's*? It is the possessive here that *lacks* the apostrophe:

It's raining.      The dog ate its food.

Apostrophe rules are therefore actually quite a bit more complicated than we might think. Whether we like it or not, we seem to be moving toward using apostrophes to set off -s affixes (plural or possessive), which is probably no surprise, given the overlap. Use is therefore much more complicated than what we consider an error; and what we consider a rule, for that matter, can be can often be the result of language change in action.

## RPE 13.7

### Punctuation “Errors”

Some punctuation rules make linguistic sense; they are designed in a way that is consistent with our intuitions about syntax and clause structure. As we've seen, we have fairly clear intuitions about what constituents are. We can see this play out in our writing by the fact that we very rarely make the mistake of putting parentheses around nonconstituents in our writing; parentheses are therefore a graphic representation of our unconscious knowledge of phrase boundaries. For example, we would probably all agree that the “right” place for parentheses in sentence (1) would be (2b) but not (2a):

1. The two students took a grammar test that they both failed.
2. a. The two students took a grammar (test that they both failed).  
b. The two students took a grammar test (that they both failed).

When we write (formally), we are supposed to follow the conventions of writing and indicate sentence boundaries with capital letters at the beginning and periods at the end. It turns out that we have pretty good intuitions about clause boundaries. But our spoken language lacks punctuation, of course, and though we sometimes use intonational pauses to indicate clause boundaries, we do not pause between sentences or even speak in sentences in most situations.

Therefore, because we intuitively know where clause boundaries are, but because we must learn the rules of punctuation, we can create **run-on**, or **fused**, **sentences**,<sup>1</sup> such as the following:

The movie was filmed in Wyoming in winter it must have been very cold.

**run-on/fused sentence** writing error in which two or more independent clauses are joined without punctuation

1. Run-on sentences are not always clearly defined. Computer grammar-checkers, for example, underline sentences of a certain length, categorizing them as too long, or run-on. Given the grammatical possibility for recursion, there is no linguistic equivalent of a sentence that is too long. Our grammatical rules allow us to generate clauses of infinite length; what keeps us from producing such constructions in speech has to do with the limitations of our memories rather than with the limitations of our grammar.



In this example, there are two independent clauses, which are not separated by any kind of punctuation. This lack of punctuation is typically viewed as a rather egregious writing error, but most students, if asked to insert a period, would have no problem doing so, creating either (a) or (b). (If you read the example sentence about the movie aloud, you naturally pause at the end of the first independent clause.)

- a. The movie was filmed in Wyoming. In winter it must have been very cold.
- b. The movie was filmed in Wyoming in winter. It must have been very cold.

That we know where to put the period (once reminded) is not surprising, given our intuitions about clause boundaries. Omitting a period therefore doesn't mean we don't understand clause structure but rather that we must learn to graphically represent clause boundaries. The writing error known as a **comma splice** comes from putting a comma rather than a period (or semicolon) between two independent clauses:

The movie was filmed in Wyoming in winter, it must have been very cold.

These examples illustrate a fundamental distinction between our unconscious knowledge of spoken language and conscious knowledge of how that spoken language is to be visually represented. Moreover, though run-on sentences and comma splices are considered serious errors in writing, they do not reflect an error in our real understanding of language.

The writing error known as a **sentence fragment** is another excellent example of the mismatch between oral and written language and of the difficulty we sometimes have in transferring oral language to the page. In writing, we are taught to use sentences rather than pieces of them, or fragments, even when our meaning is quite clear. Consider, for example, the following representation of a perfectly natural oral discourse exchange:

Speaker A: What kind of car did Alonzo buy?  
Speaker B: A Toyota.

Though it is natural to reply as Speaker B does, in writing (except in representation of dialogue) we are encouraged to avoid fragments and to fill in what we call "old" information, or information that is known to both speakers. We typically learn that the desired written version of speaker B's reply, if it is not written as a dialogue, is *Alonzo bought a Toyota* rather than the fragment *A Toyota*. Learning to write formally, therefore, often involves overriding our patterns of speech to create a document or record that can be read and interpreted without the benefit of clues available to us when we speak face to face.

We have not, of course, detailed all the punctuation conventions or even all those that correlate with linguistic knowledge. We mean to show only that some punctuation conventions do reflect aspects of the linguistic system: phonological, morphological, and syntactic. Sometimes, however,

**comma splice**  
writing error in which two or more independent clauses are joined with a comma rather than a period

**sentence fragment**  
phrase or clause that is punctuated as a sentence (with a capital letter and a period) but is not a complete sentence

our intuitions do not correspond to the written form of the language. When we learn how to write sentences, we also learn about punctuation, capitalization, and so on—what teachers sometimes refer to as mechanics or writing conventions—such things as using commas in dates (e.g., September 12, 2014) and using periods in abbreviations (Mr. Schuyler Jensen). These kinds of rules for representing sentences in print do not correspond to our intuitive knowledge and must simply be learned and memorized.

As you probably know, rules of punctuation are not the same in all languages. The quotation marks used to enclose direct quotation in English, for example, are not used by the French, who use either a dash (—) at the opening of a quotation or angled brackets called *guillemets* (« ») to surround it. Where English would use underlining or italics to indicate emphasis, English quotation marks are sometimes used in other languages, like Spanish. In British English, it is standard to put the end punctuation outside of quotation marks, whereas inside is preferred in American English.

**RPE 13.8**

## Writing Rules, Standardization, and Authority

Punctuation and spelling are both important aspects of language standardization. Writing rules and conventions are taught fairly uniformly in the U.S. school system; we all learn to capitalize the first letter of the first word of every sentence, for example, and to end each sentence with a period. Spelling is also standardized (and enforced by computer spell-checkers), as are certain grammatical constructions (we are taught to avoid double negation in print, and grammar-checkers point that out as well) and vocabulary (we also avoid *ain't* and *yeah*, even though we may commonly use them in speech). Though this standardization certainly influences our oral language (e.g., we might start avoiding double negation and *ain't* in oral speech, too), our oral language system is relatively less vulnerable to standardization than our written system. This in turn leads us to issues of language authority; if the writing system is the primary locus of language standardization, who is in charge of the writing system, and who decides what is standard? Who writes grammar-checkers for computers, grammar handbooks for use in schools, dictionaries, and other usage guides?

Writing a language down does have the effect of beginning the standardization process, and the introduction of the printing press to England in 1476, which allowed mass production of texts, began the standardization process for English in earnest. So, how does such standardization typically take place? A group of factors typically co-occur that can gradually result in the standardization of a language. Some of these factors are publication of dictionaries, suggesting standardized spellings and pronunciations; universal schooling, resulting in the teaching of standardized spellings and rules of writing; the teaching of the language to speakers of other languages,

# Language Alive!

## Autocorrect Isn't Always

Do you do what your grammar checker tells you? Does it seem like your smartphone has a mind of its own? Are we a little too trusting of these electronic authorities? Ben Zimmer tells the story of Hannah, who received the text message from her father: "Your mom and I are going to divorce next month." Hannah's dad thought he had texted "Disney," but autocorrect had stepped in, and the result was communication melt-down. David Pogue blogs about other autocorrect debacles, such as "sorry about your feces" rather than "sorry about your fever." For more examples, visit [DamnYouAutoCorrect.com](http://DamnYouAutoCorrect.com), which is dedicated to cataloging such errors.

Are autocorrect mishaps the result of our typing, or "fat-finger" errors? Not always. Autocorrect errors are particularly difficult to predict because the kinds of corrections our technology "learns" to make are actually based on patterns of individual users, so not all errors are reproducible.

*For more information*

Zimmer, B. Auto(in)correct. *On Language*. *New York Times*, 13 January 2011.

Damn You Auto Correct! <http://damnyouautocorrect.com/category/best-of-dyac>

Pogue, D. *Pogue's Posts*. *New York Times*, 21 June 2010. <http://pogue.blogs.nytimes.com/2010/06/21/autocorrect-follies/?scp=1&sq=autocorrect%20follies&st=Search>

necessitating a relatively uniform version of the language; and a canon of literature. In some countries, the selection of a standard language is a social and political issue, and laws are drawn up declaring the official status of a particular language. (English, for example, is the official language and the standard language of schooling in many countries, including the following in Africa: Botswana, Cameroon, Ethiopia, Gambia, Kenya, Malawi, Namibia, Nigeria, Sierra Leone, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe.) It is the native language of very few people in any of those places but is chosen as a neutral language of government. (Note that English is not the official language of the United States, though it is the official language in about twenty-nine of the states. (See Chapters 12 and 14 for more discussion of the Official English movement.)

RPE 13.9

RPE 13.10

## The Power of the Dictionary

One of the major ways in which a language is codified and standardized is through the compiling of a dictionary. Lexicographers, or dictionary makers (see "Accent on Lexicographers" in Chapter 6), determine how a word should be spelled, pronounced, and defined. Today's lexicographers make their

decisions based on usage; that is, they observe how the language is actually used and then offer the spelling, definition, and usage that is the most common and “preferred.” The dictionary then forms the basis of what we think of as the correct spellings, pronunciations, and definitions of words. Lexicographers also make choices about whether words should be labeled *archaic*, *slang*, *regionalism*, and so on. We might not all agree on how to pronounce *praline* or *aunt*, and an accurate dictionary must take such differences into account. Dictionaries must also reflect how language changes over time; though spelling may remain the same, we’ve seen in previous chapters how the meaning and pronunciation of words can change, sometimes quite dramatically, over time. Nevertheless, we usually trust that the information in a dictionary is accurate and up to date, and we tend to defer to its advice.

## RPE 13.11

## Did You Know...?



## The Oxford English Dictionary

The *Oxford English Dictionary* is the most comprehensive historical dictionary of English, providing not only words and their definitions but also the history of words and their meanings.

The history of the *OED* itself is fascinating. About 150 years ago, the London Philological Society proposed this new dictionary, recruited James Murray as its editor, and convinced Oxford University Press to support the project. This huge undertaking depended on scores of readers, who combed through all the print material they could get their hands on, laboriously cataloguing every appearance of a word, a quote in which the word appeared, its date, and its meaning at that time.

One notorious and prolific contributor to the dictionary was W. C. Minor, a surgeon and soldier and murderer confined to the Broadmoor Asylum for the Criminally Insane. Minor invented an ingenious tracking system to find words and collect quotations (Winchester 1999).

Contemporary *OED* editors still visit the “quotations room,” a vast repository of print material, but they have access to an enormous range of electronic and print material—magazines, cookbooks, film scripts, Internet blogs, zines, and so on. To date, the *OED* contains some 3 million quotations! And it’s growing—*OED Online* publishes updates every 3 months. Recent additions include *taquito*, *muffin top*, the verb *to heart* (as in *I heart my golden retriever*), *couch surfing*, and many Internet acronyms like *LOL* and *OMG*.

*For more information*

Winchester, S. 2004. *The meaning of everything: The story of the Oxford English Dictionary*. New York: Oxford University Press.

Winchester, S. 1999. *The professor and the madman: A tale of murder, insanity, and the Making of the Oxford English Dictionary*. New York: Harper Perennial.

The Oxford English Dictionary website: <http://www.oed.com/public/about>



## Writing Registers and Forms

Discussion of a standard written form for a language should not imply that all versions of the written language follow one set of standardized rules. Indeed, as in speech, writing has different registers. We represent speech in writing (called *indirect speech*) with quotation marks, as in the following examples:

Linguist Michael Krauss (1992) wrote, “Any language is the supreme achievement of a uniquely human collective genius, as divine and unfathomable a mystery as a living organism.”

“No matter how eloquently a dog may bark, he cannot tell you that his parents were poor but honest,” wrote Bertrand Russell (1948).

The words on this page are not a transcription of speech, yet we do have many ways in which we represent conversations, and certain forms of writing are more reflective of speech than others. Obviously, the conventions of written language (punctuation, spacing, capitalization, spelling) are absent in oral language, but there are connections between the two. Think about reading aloud; what cues does written language give us so that we can read text aloud in a way that makes sense and is even expressive? We also write in ways that move closer to reflecting the patterns and features of oral discourse. Consider, for example, the following short text, which you might see in an e-mail message or on a sticky note:

hi j  
WOW great job on the pres REALLY kool  
u rock  
b

Several features in this short note are used to approximate conversation. Uppercase words indicate changes in intonation for emphasis, lowercase greetings (*hi*) and closing set an informal, conversational tone. Nonstandard spellings (*kool*), abbreviations (*u*, *pres*), and lack of punctuation reflect an informal, personal register, as do initials (*j*, *b*) rather than full names, and the use of lowercase letters. This kind of informal communication, which more closely captures certain aspects of our oral language, has increased since the advent of e-mail, instant messaging (IMing), chat room speak, text messaging, and other keyboard and keypad communication. These modes are beginning to result in new ways of spelling and different standards that govern these new, informal, written conventions.

### RPE 13.12

## Electronic English

The newest form of communication, via the Internet, has allowed for instantaneous written communication in real time or almost in real time. Although it is written, this “electronic language” is much more like spoken

language than any other form of written language. Ways of conveying tone and emotion—so much a part of communication in speech but sometimes absent from written communication—have even become part of it. Crystal (2001) uses the term *netspeak* to refer to all of the varieties of written language of the Internet. He notes other terms in use: *netlish*, *weblish*, *internet language*, *cyberspeak*, *electronic discourse*, *electronic language*, *interactive written discourse*, and *computer-mediated communication* (CMC), among others. All do not refer to the same written language transmitted on the Internet, but *netspeak* is a useful term to refer generally to the more informal, unique, written conventions of much of the writing of the Internet.

This electronic communication in all its many forms is often criticized, and fear runs high, primarily among educators and newspaper pundits, that netspeak will ruin children's ability to write correctly, leading to poor spelling, ignorance of the rules of formal writing, and even the decline of morality! For example, an Arizona father quoted in *USA Today* says that he knew there was a problem when his 15-year-old son's summer job application said, "i want 2 b a counselor because I love 2 work with kids" (Friess 2003). Though it's not clear that this sort of genre mixing is indeed a widespread problem, fear of new forms of communication is not new. Crystal (2001) notes that in the fifteenth century, the invention of the printing press was thought by the Church to be a tool of the devil because it would allow the spread of uncensored ideas, which would lead to a breakdown in social order and religious authority.

We will first look at some conventions of writing that are fairly unique to e-mail (the term *e-mail* or *email* comes from *electronic mail*). One feature of this kind of communication is a higher level of tolerance for typos and misspellings. No one is going to be misled by misspellings like the following:

The meeting willb e at 4 in teh main conference room.

The reader of this e-mail may or may not make social judgments about the writer's level of education or attention to detail; but in either case, the reader is likely to be more tolerant of misspellings in e-mail but less so of such errors in more formal writing, such as in a memo or business letter. The writer would likely never allow such typos to go unedited in other print forms. (There are clearly varying degrees of formality in e-mail as well. Now that e-mail and the Internet are replacing many things formerly done only in hard copy—such as job applications, letters of recommendation, and the like—the same degree of editing is expected in those electronic documents as in printed documents.)

Capitalization is also considered somewhat optional in much of e-mail, whether at the beginning of a sentence or for proper names. Here are some examples taken from our own e-mail:

hey! That grant thing looks cool. i'll check it out and get more details.  
wanna schedule the mtg for 6?  
love ivy  
cheers, ben

Most e-mail addresses, URLs, and user names are not case sensitive, which may have led to the lack of capitalization in general, as well as what Crystal calls the “save a keystroke” principle—Internet communication is fast. Crystal says that the “save a keystroke” principle means that any use of capitalization is more marked. When something is written in all caps, it is taken as anger, as if the writer were shouting:

#### DO YOU THINK THIS IS FUNNY?

Now, there is a good bit of variation in the ways we ignore spelling and writing conventions in e-mail communication. Some e-mail users capitalize everything according to convention; and of course, there are different registers of e-mail communication, too. Now that so much of our daily communication happens by e-mail—from chatting with friends or family to applying for college and jobs—many registers are available to the writer.

Another interesting feature of netspeak is its use of abbreviations, many of which appear most frequently in chat groups and virtual worlds, though they have spread to e-mail, web pages, and even into non-Internet print forms and occasionally into speech. Here is a sampling:

lol	laughing out loud
b4	before
cul8r	see you later
idk	I don't know
f2f	face to face
oic	oh I see
imho	in my humble opinion
wu	what's up
tx	thanks
4yeo	for your eyes only
2d4	to die for
ta4n	that's all for now

**emoticon** typographic symbol or combination of symbols used to convey emotion: :-)

**RPE 13.13**

Another feature of netspeak is its use of **emoticons**, symbols used to express emotion. This innovative feature of the written language allows some conveying of emotion, a feature that the written language has been hard-pressed to do until now.

hwæt!

It seems that online abbreviations are here to stay since the venerable and authoritative *OED* now includes them in the dictionary.

## Written Standards in Flux

Informal representations of language that violate standardized rules are not restricted to e-mails and sticky notes; the McDonald's fast-food restaurant chain recently based its entire advertising campaign on the phrase *i'm lovin' it*. The image created by this phrase, with its lowercase *i* and its dropped *g*, gives the idea that

# Language Alive!

## Smileys

:) :-) :-( :-o You understand these symbols, of course, to express joking, flirting, distress, and surprise. These and many other emoticons appear often in electronic communications. Unlike other means of written communication, they stand not for words but for feelings (hence, emotion icons). This unique feature of Internet language uses not letters of the alphabet but combinations of punctuation marks to make faces. They are so common that many word-processing programs and websites automatically turn certain combinations of keystrokes into emoticons. And the simple black-and-white smileys of more than twenty-five years ago have evolved to include colorful, dancing icons.

The first documented appearance of a smiley was in 1982 as the result of misunderstandings in conversations on electronic billboards (precursors to chat rooms and blogs). Professor Steve Fahlman of Carnegie Mellon University proposed them as a means to clarify written words that, in the absence of such conversational clues as intonation and facial expression, might be misunderstood.

*For more information*

Fahlman, S. History. Carnegie Mellon Computer Science Department. <http://www.cs.cmu.edu/smiley>

Lovering, D. 2007. Digital 'smiley face' turns 25. *The Washington Post*. September 18. <http://www.washingtonpost.com/wp-dyn/content/article/2007/09/18/AR2007091800517.html>

McDonald's is, indeed, your kind of place: an informal, happy restaurant with your best interests at heart. Such deviations from the written standard abound not only in advertising but in other representations of language.

Often words are misspelled—or *respelled*, as it's sometimes called when it is done intentionally—not only in informal e-mail messages but in more public, “edited” spaces. These respellings, such as in the following examples, also known as **allegro speech**, indicate informality.

**allegro speech**  
informal respelling  
of a word

gonna, dunno, wanna  
nite, lite, thru

The spellings of these words are all in a state of transition with respect to their acceptability as standard spellings. At this time, most people view them as nonstandard but intentional spellings; thus, they differ from simple misspellings. However, their usage is restricted mostly to informal writing or print situations. We can also think about this kind of variation as a snapshot in time; language change is quite gradual, and written recognition of those changes comes even more slowly. The variations usually coexist for



some time before one becomes dominant and the other drops out. For example, the use of *nite* remains fairly restricted right now; its use may increase over time, and eventually the spelling *night* could drop out of the language.

Another example of written standardization change in progress is the way we write compounds. Whether we write words with spaces or hyphens between them or join them with nothing between them is another way in which we find variation across writers, among usage guides, and across time. So, can *lowfat* be written as a single word, or must there be a space in between: *low fat*? And is it *high end stereo* or *high-end stereo* or *highend stereo*? Often, dictionaries are not much help here. They may offer a preferred form but acknowledge the alternatives. And what the dictionary offers may differ from the way you read it most often in other published works. The trend for writing compounds seems to be that frequently used word combinations go from two words to one, sometimes passing through a hyphenated stage, though the hyphen appears to be used quite a bit less now than it used to be. (In the nineteenth century, writers routinely, though not consistently, hyphenated such words as *rail-road*, *to-morrow*, *to-day*, *in-to*, and so on. Herman Melville wrote the title of his most famous work as *Moby-Dick*.)

We now write many *compound prepositions* as single words:

into, onto, heretofore, therefore, nevertheless, whereas, whereupon

Compound prepositions are common in English, as well as in other languages—the Romance languages, Germanic languages, and Japanese (though in Japanese they are postpositions since the “preposition” follows the noun it is associated with), but even these compound prepositions are not written consistently without spaces. Consider the following example, in which the two prepositions *out* and *of* actually function as a single word:

Read to me *out of* that book.

We also represent dialectal language variation in print, for different purposes and with different results. When we listen to the recorded speech of someone whose dialect is different from our own, we may draw inferences about the speaker’s race, ethnicity, education, age, class, and so on. We draw these inferences from print representations as well, and we can even manipulate such representations for rhetorical effect. For example, nonstandard spellings can be used to influence readers’ attitudes about the speaker represented, sometimes in negative and discriminatory ways.

For example, think about the difference between these two sentences:

He sez.

He says.

This kind of respelling, known as **eye dialect**, often uses a nonstandard spelling not to reflect pronunciation but to reflect other aspects of a character. In this case, it could suggest that the character or narrator is illiterate or

**eye dialect** intentional nonstandard spelling that reflects character more than pronunciation

# Language Alive!

## Are You Ever Alright?

Is it all right to use *alright*? Merriam-Webster Online offers the following:

The one-word spelling *alright* appeared some 75 years after *all right* itself had reappeared from a 400-year-long absence. Since the early 20th century some critics have insisted *alright* is wrong, but it has its defenders and its users. It is less frequent than *all right* but remains in common use especially in journalistic and business publications. It is quite common in fictional dialogue, and is used occasionally in other writing: 'The first two years of medical school were *alright*—Gertrude Stein.'

However, Wilson (1993), in the *Columbia Guide to Standard American English*, is a bit more blunt: "*All right* is the only spelling Standard English recognizes." But Bergen and Cornelia Evans (2000), in *The Dictionary of Contemporary Usage*, point out that there's a case to be made for *alright*. "Using 'alright' as a synonym for 'O.K.' or 'satisfactory'," they say, "would allow us to make the distinction between 'the answers are alright' (satisfactory) and 'the answers were all right' (every one of them)." Hmm. So, you decide!

*For more information*

Evans, B. & C. Evans. 2000. *The dictionary of contemporary usage*. New York: Random House.

Merriam-Webster Online. 2011. <http://www.merriam-webster.com/>

Wilson, K. 1993. *Columbia guide to standard American English*. New York: Columbia University Press.

uneducated. Eye dialect is also used in representations of different (usually considered nonstandard) dialects. Here's a line from Zora Neale Hurston's story "Spunk":

"Looka theah, folkses!" cried Elijah Mosley, slapping his leg gleefully, "Theah they go, big as life an' brassy as tacks."

Other well-known users of eye dialect in American literature include Joel Chandler Harris, author of the *Uncle Remus* stories, Mark Twain, and Cormac McCarthy.

RPE 13.14

## The Effects of Print

The printed word is very strong indeed and seems to have the potential to affect our language acquisition. Children who are learning to read see that there is not a one-to-one correspondence between sound (pronunciation) and

symbol. A child says /no/ but writes *know*. One child says /dæt/ while another says /ðæt/, but both learn to spell the word *that*. So we are not as likely to change pronunciation to match spelling because, as we begin to learn to read, we realize that it is not a wholly phonemic system. However, the lack of correspondence between our pronunciation and our writing system is less evident in morphological and syntactic examples; a child would not be likely to say *bringed* and then represent that as *brought* on the page without recognizing that there is a mismatch between the word as the child says it and the way it is written. And utterances in which the morphology or syntax does not conform to the written version are less likely to persist for kids who are exposed to lots of print early (since such variations do not appear in print very often). These factors are the primary reason that morphological and syntactic variations are more stigmatized than phonological ones.

The idea that early exposure to print correlates with success in reading and writing has been accepted in some very broad ways, resulting in, for example, pediatricians giving out free books and national ad campaigns that attempt to get the message out about the importance of early literacy and exposure to books (such as the oldest literacy organization in the United States, Reading Is Fundamental [RIF]).

The enormous importance that we place on literacy is intertwined with our notions of correctness, standard English, and dialect. There are words and phrases that are seen largely in print and occur in formal or archaic speech that children pick up not from speech but from being read to; examples are *for instance*, *inasmuch as*, *however*, and narrative syntactic patterns such as *said she*. And as mentioned, we all have “spelling pronunciations” in which pronunciation is modified after seeing the word in print. Every first-grade classroom is full of examples.

“Oh, it’s *pumpkin*!” says a six-year-old upon seeing the word written, thus modifying her former (and very typical) pronunciation without the medial [p].

Another six-year-old child pronounces *because* with an initial [p] and writes *pekose*. When the teacher corrects his spelling, he also changes his pronunciation of the word.

But it happens to adults as well. You have probably seen a word in print and been surprised at the spelling because it didn’t match your pronunciation:

Pronouncing the <n> in *hypnotize* rather than the assimilated [m], so *hypmotize* becomes *hypnotize*.

Or changing the perhaps naturally acquired *undoubtebly* or *supposebly* to *undoubtedly* and *supposedly* after seeing them in print.

Other times, however, we do not alter our natural pronunciation to match spelling, particularly if doing so would require us to deviate from an

hwæt!

Benjamin Franklin wrote,  
"Write with the learned,  
pronounce with the vulgar."

accepted pronunciation. For example, no one would pronounce *know* with a [k] or *colonel* with the first [l] because these pronunciations would sound very odd, outside the norm.

Before we end this chapter, let's consider here how a language makes the transition from an unwritten language to a written one. Though there is no consensus on the exact figures, linguists estimate that only about 25 percent of the world's languages have written forms. If a language has not been written, it causes no problems at all for the language; the complex rules and principles that underlie linguistic systems do not depend on writing; nor does child language acquisition, for which only exposure to naturally occurring language is required. Representing language in writing, however, has a number of possible cultural and political effects.

Writing systems for many languages—for example, many Native American languages—have been developed within the last fifty years. Given what we now know about phonetics, and given how difficult it can be to learn to read and write using a writing system that has so many inconsistencies (such as the system used for English), a newly written language would appear to be a perfect opportunity to develop a phonetically based writing system that has a one-to-one correspondence between sound and symbol. And while the International Phonetic Alphabet has been employed to some extent to write many languages that did not have written forms until recently, there are some practical hurdles to adopting the IPA as a writing system: the unfamiliarity of the symbols and a familiarity with—and thus, a bias toward—the spelling conventions of English. Also, speakers of endangered languages face so many hurdles that a new alphabetic system is typically not deemed worthwhile by the members of the community. Also, bear in mind that a language will continue to change, so even if there is a one-to-one match between sound and symbol at first, that match will not last very long.

It is important to understand our biases as a literate society. We often take it for granted that to be educated is to be literate, so it can be hard to understand the different ideas about education, intelligence, and culture in the hundreds of communities with oral rather than written literary traditions. Though many Native American languages, for instance, were not written down until relatively recently, the oral traditions in many of these languages and their communities are very complex and sophisticated. There is an emerging new study of the literary principles and qualities of oral literature, its narrative structure, and literary patterning, based on examples from many such communities. Such formal analyses show these oral traditions in the context of the world's literary heritage and seek to represent the texts in a way that reflects how the stories are appreciated and understood by members of the cultures from which they came.



## Accent on Copy Editors

We all have ideas and attitudes about language that are sometimes based on social factors rather than on linguistic fact. Some ideas about language reflect discriminatory attitudes about other social groups. The very notion of a standard language can be discriminatory, especially to those who speak nonstandard language varieties.

But language standards are not always discriminatory or unnecessary. Though there certainly exist language mavens who promote one form of the language over another, there are others, namely copy editors, whose expertise lies in a more balanced approach.

A copy editor's job varies depending on the copy to be edited and the intended readers. Copy editors check all of the written material that goes into books, magazines, journals, newspapers, websites, dissertations, marketing brochures, corporate reports, and other published material—anything that requires putting words together to convey a message. Copy editing includes correcting errors of spelling, usage, and grammar and checking format. Some copy editors are also fact-checkers or reporters, and some do layout and design. Copy editors check texts for libel, errors of fact, and plagiarism.

Beyond these “technicalities,” copy editors polish material for coherence (tone, vocabulary, level of formality, etc.) while respecting the author's personal writing style and allowing the author's “voice” to come through. Copy editors are not usually expected to rewrite and, if they do their job well, you will never notice their work. Other copy editors might notice, though. The American Copy Editors Society awards its annual Robinson Prize for all-around excellence based on “a combination of elements, including editing, design, mentoring and training, fostering teamwork and pride among colleagues,



conflict resolution, creative problem solving, and anything else that furthers the craft of professional editing.” Andy Angelo of the Grand Rapids Press (pictured above) won the prize in 2010.

Copy editing requires a complete knowledge not only of publishing but of traditional prescriptive rules of writing and style, spelling, and various copy editing marks. Copy editors must be aware of language conventions, how the standards change over time, and how the changes are reflected in written language. For example, the casual tone of this book would not likely have been allowed in an academic text even a few years ago. We often start sentences with conjunctions such as *and*, and we use contractions such as *don't* and *can't*—practices that would have been discouraged, if not “corrected,” had we written this book several decades ago.

Excellence in copy editing relies on a flexible rather than dogmatic approach to language usage. Writing style varies dramatically not only among individual writers but also by field, topic, and type of publication. Lest you think there is only one right way to write, here are some style guides that authors and copy editors use; each includes the rules of grammar, usage, spelling,

and punctuation, and some are targeted at a particular genre or field: *The Chicago Manual of Style*, *The Associated Press Stylebook*, *The Elements of Typographic Style*, *The Modern Language Association Style Handbook*, *The Oxford Guide to Style*, *The Publication Manual of the American Psychological Association*, *Modern Humanities Research Association Style Guide*, *The New York Times Manual*, *The ACS (American Chemical Society) Style Guide*, *The Manual of Style for Technical Publications*, *The American Medical Association Manual of Style*, and the list goes on.

Copy editors have degrees in linguistics, journalism, communications, English or other languages, and other disciplines. They sometimes

specialize in fields such as medicine, technical writing, computer science, and law. And most copy editors read a wide range of material; they get paid to read!

*For more information*

The American Copy Editors Society. <http://www.copydesk.org/>

Society of Professional Journalists. <http://www.spj.org/>

Walsh, B. 1995. The slot: A spot for copy editors since 1995. <http://www.theslot.com/>

Website of any publication or professional organization

## Summary

In this chapter, we have examined the written representation of language. Though language itself is something humans come prewired with, writing down those languages is a human invention that only about one-quarter of the world's languages have. A variety of writing systems have been created over the last few thousand years, including systems based on phonemes, systems based on syllables, and ideographic systems based on meaning. We have seen that though we often equate spoken and written language, there are actually a great many differences between them. We have seen that the English spelling system is only partially phonetic but that its nonphonetic features reflect a great deal about the history of the language. We have also looked at the systems of spelling and punctuation and how both writing and punctuation standards are still changing, illustrating the ways in which a print system can affect our ideas about language and about standardization in our highly literate society.

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## Review, Practice, and Explore

### RPE 13.1 Logograms

Consider the following symbols, and determine whether they are logograms or ideograms or both. Is it clear what each indicates, or might there be more than one interpretation? Describe what meaning you think each is intended to convey. What other interpretations might exist?



### RPE 13.2 Writing Systems

- A. Go to the website <http://www.wam.umd.edu/~rfradkin/alphapage.html> and carefully examine the transition of the various alphabetic systems as graphically represented by Robert Fradkin. Are there any in which the “leap” from one symbol to the next does not seem likely? What kinds of things might account for the changes?
- B. Consider the variation in handwriting systems. The way we are taught to form letters in school blends into a unique system by the time we are adults; many people develop a blend of printing and cursive, taking features of each into their own unique style. Consider letters like a/a, and make a list of other variations that you notice. Think about your own handwriting and the ways in which it varies from the handwriting of other people you know. Write a paragraph summarizing the issues raised here, focusing on the variations from a standard that are allowed in handwriting and why you think we generally allow them.



**RPE 13.3** Old English Pronunciation Leaves Spelling Remnants

Our spelling conventions offer us a glimpse into the phonological history of the language. Notice the inconsistencies we have with the pluralization of words that end in /f/:

wolf: wolves, dwarf: dwarfs/dwarves, scarf: scarves, roof: roofs, leaf: leaves, waif: waifs, wharf: wharfs/wharves

Some words that end in /f/ form their plural in the “regular” way. In Chapter 4, we saw that our regular rule of pluralization is that if a word ends in a voiceless consonant, add /s/; so, *roof* /ruf/ → /rufs/. Why, then, do we have forms like *wolves* and *scarves* instead of *wolfs* and *scarfs*? Because in Old English, the vowel before the final *s* was pronounced, and a phonological rule of Old English was that when a fricative came between voiced sounds, it, too, became voiced: the plural of *wulf* ‘wolf’ was [wulvas] phonetically, though it would be spelled *wulfas*. Old English had no voiced fricatives as phonemes, so [f, θ, s] did not have [v, ð, z] as voiced counterparts phonemically, though they did occur as allophones quite early in Old English. Later on in the Middle English period, after influence from French, we began to use the letter *v*. So our current state of pluralization of words that end in /f/ illustrates the conflict between our natural phonological rule of pluralization and the influence of spelling on pronunciation.

Determine the plural of each of the following words, and then look them up in a dictionary. Determine whether any of the plurals differ for British speakers and American English speakers. Also, determine which of them have two accepted, standard spellings:

belief, leaf, roof, scarf, cuff, wolf, loaf, dwarf, brief, cliff, reef, hoof, proof, chief, knife, half, calf, life, thief, wharf, chef, plaintiff, wife, shelf, handkerchief, giraffe, sheriff, whiff

**RPE 13.4** Spelling Flukes

Mishearing and, therefore, misspelling happens more frequently with idiomatic phrases like these:

*laughing stock* as *laughing stalk*  
*nick picky* for *nit picky*  
*I would just assume* for *I would just as soon*  
*all intensive purposes* for *all intents and purposes*  
*segue* as *segue way*

Why do you think the mishearings and consequent misspellings happen? Find examples of some other typical mishearings that lead to misspellings.

Here are two historical misanalyses; that is, the words *nickname* and *apron* used to be *ekename* (with separate vowel changes) and *napron*:

an ekename  
 a napron

Look up these words in the *Oxford English Dictionary* and summarize their etymologies. Also consider the contemporary phrase *a whole nother*, in which the word *another* is separated. Do you think *nother* is likely to emerge as its own word? Why or why not?

**RPE 13.5** Spelling Reform

Write a letter to the Simplified Spelling Society outlining the pros and cons of spelling reform; make a recommendation for a modest reform or a complete overhaul of English spelling.

**RPE 13.6** Spelling Reform in Other Languages

Conduct some research on the spelling reform movements for other languages that have enjoyed somewhat more success than those for English, including German, Japanese, Irish Gaelic, Norwegian, Russian, Spanish, or Portuguese. In what ways was the reform successful? In what ways did it fail? Were there features of the language and spelling system that made it easier to reform compared to English? What sort of support (governmental, educational, etc.) seems to be required for reforms to succeed?

**RPE 13.7** Punctuation Fluctuation

Some punctuation conventions have more than one accepted standard. Use several online or printed usage guides to see their recommendations for the following:

- commas with items in a series
- punctuation with quotations
- possessive apostrophes with words, especially names, already ending in <s>:
  - *Jones' house, Jones's house, Joneses' house*

Summarize the recommendations and the reasoning behind each explanation.

**RPE 13.8** Comma Rules

Find rules about comma usage from a usage guide, and list them. Which of the rules can a conscious awareness of grammar help you with, and which are simply conventions of writing that must be learned? Are all of the rules useful? If so, what purpose(s) do they serve?

**RPE 13.9** The Teaching of Standard English

Though most would agree that there do need to be standards for written English, there is no agreement about whether to teach a *spoken* standard and, if so, how to go about doing so. To discover where your feelings lie, consider the following questions regarding Standard Written versus Standard Spoken (and their roles in education):

- What is the role of the teacher or school in the teaching of Standard Written English? What are the goals?
- What is the role of the teacher or school in the teaching of some Standard Spoken English? What sorts of differences exist between the spoken and written standards?
- Is simply modeling an effective way to teach a spoken standard?
- Is talking about dialect, register, style, formality, appropriateness, and so forth directly a way to approach teaching (about) a spoken standard?
- In your own experience, what features of a standard spoken dialect were you explicitly taught? If you weren't taught them, how did you acquire them? How might that differ across dialect groups or speech communities?
- What's the difference between shifting register and shifting dialects?

**RPE 13.10** Survey of Writing Errors

Conduct a writing error survey by interviewing teachers and asking them to list their top five writing errors. Also ask teachers how they grade errors of writing on written work. Do they consider these grammatical errors? And more generally, what does the term *grammar* mean to them? You will likely find that teachers don't all agree on what is considered an error. Why? How is *error* defined then? Some good resources on perceptions of writing error include Beason 2001, Hairston 1981, and <http://public.wsu.edu/~brians/errors/>.

**RPE 13.11** The Oxford English Dictionary

Conduct some research on the *Oxford English Dictionary*. Explore the website <http://www.oed.com/>. What do “new word” editors do? What are some current additions to the dictionary? Read entries for some words, count the number of quotations, and list the dates that they appear. What kinds of texts are the quotations from? The website is full of interesting information and even includes short videos on different topics. Write a one-page description of what you find.

**RPE 13.12** Conversation Transcription

- A. Record 2 to 5 minutes of casual conversation. (You must have permission to do so from the people you record. However, try to make the recording as unobtrusive as possible—you don't want their speech to be stilted or formal as a result of the recording. Tell them you're recording them, but then try to get them to forget about it.) Now, transcribe the recording, taking down everything that was said, including “ums” and “ahs,” false starts, and so on. (You can leave out names or substitute fake ones if you'd like.) Then answer the following questions:
  - Did you include any pseudophonetic spellings: *-in'*, *dunno*, and so on?
  - If so, which words did you do it with, and why? Do you know what guided your decisions to select those words?
  - How did you indicate interruptions and utterances that trailed off?
  - Did you edit out anything besides names? Why?
  - Are all the transcriptions of very casual conversations? Are any somewhat formal?
  - What factors seem to affect the number of interruptions, unfinished utterances, or the use of slang?
- B. Assume you're a newspaper reporter who is selecting quotations from the conversation for an article you're writing. Which would you select, and how, if at all, would you alter them? Would you put them in quotation marks?

**RPE 13.13** Electronic English

Conduct some research and write a brief essay on the potential effects of IMing, text messaging, and other e-mail and chat room communication. Consider questions such as these, among others: Is there potential for some of these conventions to come into other genres of more formal writing? If so, would that be detrimental to the written standard? How might teachers deal with such questions?

**RPE 13.14** Dialect in Literature

In the following selections from Adriana Trigiani's *Big Stone Gap*, the author uses various techniques in her representation of language to convey something about the various characters. Some of the names of her characters are listed, followed by a brief description of the character. The underlined words and phrases are typical of a Southern dialect, while the bolded examples convey the informality of speech but aren't unique to a specific dialect. Consider also how the age, socioeconomic status, and education level are reflected here in the representation of language.

*Fleeta Mullins*—works at the counter in the pharmacy, lived in the Gap all her life:

"Hi-dee, Ave Maria," she barks . . . I need to declare me some sort of moratorium on these damn fund-raising jars," Fleeta complains. "I can't hardly ring up a sale without **flippin'** one over. . . . You're too much of a soft touch. Let me handle them kids that come in here. If it wasn't for me, **people'd** run all over you all day long. I'll tell them **damn** kids to take their jars to the Piggly Wiggly. We ain't got the room; they do . . ." (p. 16)

*Teena Lee*—a second-grader:

"Miss Mulligan, my mamaw said you'd put my jar on the counter 'cause we trade here . . ." (p. 16)

*Iva Lou Wade*—librarian, driver of the bookmobile, in her 40s:

"Y'all scoot. And here's my number when you get the information. . . Well, **honey-o**, somebody's got to put a fire under your **butt**." (pp. 98–99)

*Ave Maria Mulligan*—35-year-old pharmacist, college-educated:

"Good. Right. **See there?** Iva Lou gets what I'm talking about. Sooner or later everybody has to ask the big questions of themselves. Some of us ignore the truth, and some of us gut the interior of our lives and attempt to reinvent it. I am doing the latter." (p. 182)

Find a text that uses respellings of different types as well as other indications of dialect, and do an analysis similar to the one here, in which you indicate features of dialect, informal features, and any others you notice that the author may be using to indicate age, socioeconomic status, or education level of the characters via their speech.

**RPE 13.15** Spelling Pronunciations

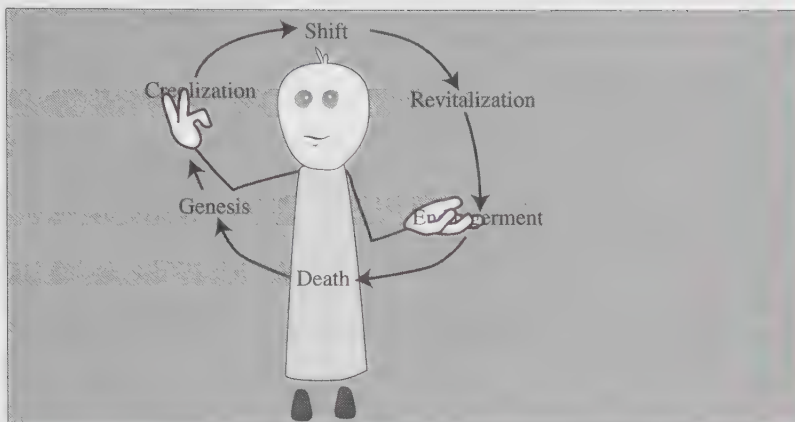
Remember that a spelling pronunciation is a pronunciation that reflects a word's current spelling, which differs from the way it was pronounced in previous generations. The following words have undergone some kind of pronunciation change based on their spelling for many speakers of American English. Research the etymologies and pronunciations of the following words, and describe how they exhibit spelling pronunciations.

forehead, virtuals, figure, ye, wainscoting, tsk tsk





## Chapter at a Glance



# The Life Cycle of Language

## Key Concepts

- There are many stories and theories about the origins of language and why the human language system differs from other species' communication systems.
- The origins of language could tell us something about why our brains are organized for language as they are.
- Not all languages descend from a parent language; the life cycles of languages include pidgins and creoles.
- The loss of a language is a loss of cultural identity and can happen through colonization or as one language supplants another over time.
- Language policy can help erode or promote preservation of language and cultural identity.

## Did You Know . . . ?

Chinook Jargon  
Ketchup-Only Law  
Language Preservation in Action

**Language Alive!** The Origins of American Sign Language

Esperanto: A Failed Lingua Franca

**Linguistics in the News** Sundance Features *The Linguists*

**Accent on** What Linguists Can Do

## Language Origins

A Mother Tongue?  
A Linguistic Big Bang?  
Why Don't Apes Do It?

## Language Genesis

Creeley Revisted  
Jamaican Creole  
Hawaiian Creole English  
Tok Pisin  
Gullah and African American English

## Language Shift

Latin  
Native American Languages  
Norman French in England  
Language Planning  
English-Only Laws

## Language Revitalization

Hebrew  
Welsh  
Hawaiian  
Native American Languages

## Summary

## Sources and Resources

## Review, Practice, and Explore

*Language is power, life and the instrument of culture, the instrument of domination and liberation.*

—ANGELA CARTER

In this final chapter, we discuss the life cycle of languages—language birth, language and dialect endangerment, language death, language maintenance and survival—and what factors lead to each phase of the cycle. An important issue we discussed in Chapter 1 was the ways in which human language differs from the communication systems of other species. In this chapter, we will delve more deeply into the origins of human language—what we know about those origins and what remains a mystery. Did all languages descend from one *proto-language*? Does Proto-Indo-European, which we discussed in Chapter 11, share with other proto-languages an ancestor from which the world’s language families descend?

Investigating the origins of language also brings us back to themes we discussed in Chapter 2, namely, how our brains are organized for language. When did that organization occur, and why? What biological adaptations led to human language, adaptations not shared by other species?

Remember that not all languages appear because they descend from a parent language. The life cycle of languages includes pidgins and creoles, languages that arise through language contact or sometimes virtually out of nothing, as is the case of Nicaraguan Sign Language (introduced in Chapter 2). Here, we will investigate the origins and grammar of a wider range of creoles in more detail to see what these relatively young languages have to tell us about how languages emerge, which in turn sheds light on how our minds are organized for language.

In previous chapters, we touched on how language and culture are intertwined and how our language provides insights into how we think about the world. We saw in Chapter 10 that pragmatic rules (of conversation, politeness, speech style) vary from culture to culture and that our language is an integral part of how we identify ourselves. In this chapter, we’ll explore how languages supplant one another gradually over time or as the result of colonization and imperialism. Such changes can have a dramatic effect on cultural identity and can lead to efforts to revitalize language in order to preserve and protect speakers’ identity.

Language shift, death, and revitalization are closely tied to power and authority; the dominant language is typically the most powerful one. We’ve seen how language authority emerged in seventeenth-century England with the rise of prescriptive grammar and led to what we consider standard English today. We will probe language standardization in more depth here—how it applies to oral and written language and how it can lead to linguistic discrimination.

We will look at some examples of language policies that sometimes protect and sometimes erode speakers' right to their own language.

## Language Origins

Where did language come from? And when did it start? Did it happen all at once or more gradually, in stages? These are all questions that we humans are very curious about, but they are all impossible to answer with any degree of certainty. In this section, we'll discuss the origins of language. Is there such a thing as a single language from which *all* languages descend—a “mother tongue”?

### A Mother Tongue?

Remember that the large Indo-European language family discussed in Chapter 11, containing about 450 languages, is one of some 116 language families in the world, resulting in about 7,000 languages spoken and signed today. Table 14.1 is the list of language families from *Ethnologue*, “an encyclopedic reference work cataloging all of the world's 6,909 known living languages” (Lewis 2009). The numbers in parentheses indicate the number of living languages in each family.

## Language Alive!

### The Origins of American Sign Language

In 1817 Thomas Gallaudet and Laurent Clerc founded the first school for the deaf in North America, in Hartford, Connecticut. Gallaudet had learned much about teaching the deaf from visiting a school in Paris that had been set up in 1755 by Abbé Charles Michel de L'Eppe, who founded the first free school for the deaf there. De L'Eppe recognized that a sign system was already being used by a group of deaf people in Paris, so he developed a system based on the existing signs. At the school in Connecticut, the French sign language combined with the students' own sign systems and with a sign language that had been used on the island of Martha's Vineyard, from which many of the students came. (The island had a high rate of deafness.) American Sign Language eventually emerged from this situation to become the dominant sign language in the United States and Canada. Because of the early influence of the French sign language, contemporary French Sign Language and American Sign Language share about half of their vocabulary; however, they are not really members of a language family. In fact, developing a family tree for sign languages proves challenging due to the complex ways in which sign languages are acquired and taught.

*For more information*

Lane, H. 1989. *When the mind hears: A history of the deaf*. New York: Vintage Books.



Table 14.1

## World Language Families

Afro-Asiatic (374)*	Harakmbet (2)	Pauwasi (5)
Alacalufan (2)	Hibito-Cholon (2)	Peba-Yaguan (2)
Algic (44)	Hmong-Mien (38)	Penutian (33)
Altaic (66)	Hokan (23)	Piawi (2)
Amto-Musan (2)	Huavean (4)	Pidgin (17)
Andamanese (13)	Indo-European (439)	Quechuan (46)
Arafundi (3)	Iroquoian (9)	Ramu-Lower Sepik (32)
Arai-Kwomtari (10)	Japonic (12)	Salishan (26)
Arauan (5)	Jivaroan (4)	Salivan (3)
Araucanian (2)	Kartvelian (5)	Senagi (2)
Arawakan (59)	Katukinan (3)	Sepik (56)
Arutani-Sape (2)	Kaure (4)	Sino-Tibetan (449)
Australian (264)	Keres (2)	Siouan (17)
Austro-Asiatic (169)	Khoisan (27)	Sko (7)
Austronesian (1257)	Kiowa Tanoan (6)	Somahai (2)
Aymaran (3)	Lakes Plain (20)	South Bougainville (9)
Barbacoan (7)	Language isolate (50)	South-Central Papuan (22)
Basque (1)	Left May (2)	Tacanan (6)
Bayono-Awbono (2)	Lower Mamberamo (2)	Tai-Kadai (92)
Border (15)	Lule-Vilela (1)	Tarascan (2)
Caddoan (5)	Macro-Ge (32)	Tequistlatecan (2)
Cahuapanan (2)	Mairasi (3)	Tor-Kwerba (24)
Carib (31)	Maku (6)	Torricelli (56)
Central Solomons (4)	Mascoian (5)	Totonacan (12)
Chapacura-Wanham (5)	Mataco-Guaicuru (12)	Trans-New Guinea (477)
Chibchan (21)	Mayan (69)	Tucanoan (25)
Chimakuan (1)	Maybrat (2)	Tupi (76)
Choco (12)	Misumalpan (4)	Unclassified (73)
Chon (2)	Mixed language (23)	Uralic (37)
Chukotko-Kamchatkan (5)	Mixe-Zoque (17)	Uru-Chipaya (2)
Chumash (7)	Mongol-Langam (3)	Uto-Aztecan (61)
Coahuiltecan (1)	Mura (1)	Wakashan (5)
Constructed language (1)	Muskogean (6)	West Papuan (23)
Creole (82)	Na-Dene (46)	Witotoan (6)
Deaf sign language (130)†	Nambiquaran (7)	Yanomam (4)
Dravidian (85)	Niger-Congo (1532)	Yele-West New Britain (3)
East Bird's Head-Sentani (8)	Nilo-Saharan (205)	Yeniseian (2)
East Geelvink Bay (11)	Nimboran (5)	Yuat (6)
East New Britain (7)	North Bougainville (4)	Yukaghir (2)
Eastern Trans-Fly (4)	North Brazil (1)	Yuki (2)
Eskimo-Aleut (11)	North Caucasian (34)	Zamucoan (2)
Guahiban (5)	Oto-Manguean (177)	Zaparoan (7)
Gulf (4)	Panoan (28)	

\*Numbers in parentheses indicate the number of languages in the family.

†*Ethnologue* categorizes all sign languages in a single group here, though most of these languages are unrelated.

Source: Lewis, M. Paul (ed.), 2009. *Ethnologue: Languages of the world*, 16th ed. Dallas, Tex.: SIL International. Online version: <http://www.ethnologue.com/>. Used by permission of SIL International.

When we look at this vast number of language families containing thousands of languages, you may wonder how they all came about. People seem to have always wondered that; most cultures of the world have myths about the origin of language as well as how and why languages change and vary.

For example, a Salish myth tells how an argument led to the divergence of a language into two languages. Two people were arguing whether the high-pitched whistling noise made by ducks in flight is from air passing through the bill or from the flapping of wings. The argument is not settled by the chief, who then calls a council meeting of neighboring villages' leaders. This breaks down in argument when nobody can agree, and eventually the dispute leads to a split where some people move far away. Over time, they slowly began to speak differently, to need words for new objects, and eventually new dialects and languages were formed (Boas 1917: 111–112).

Was there originally a single language from which all of the world's languages descended? This is a question not easily answered, and it is one that can never be answered with complete certainty. Languages leave no fossil record, and the written information we do have about language goes back only several thousand years, not a long time in terms of human history. Archeological evidence seems to indicate that modern humans, *Homo sapiens*, emerged within the last 150,000 years. Some have wondered whether the success of our species over other extinct hominids may be related to our language abilities. Those with language could organize, plan, plot, and convey all sorts of information that would have given them an advantage over other hominids. We don't know for sure that extinct hominids did not have language, but it is a common supposition that they did not.

The comparative method (described in Chapter 11) has led to construction of family trees much like the Indo-European family tree. Historical linguists have also been at work since the early twentieth century on reconstructing **proto-languages** for these families—a single parent language for each of these families from which all members of the family may have originally descended. Proto-Indo-European is that proto-language for the Indo-European language family. Written records from some members of the Indo-European family go back only about 6,000 years for the oldest (Sanskrit) and are far more recent for other languages in the family (Latin, Greek, Old English). Most linguists would agree that the reconstruction of language families is good science, though there are ongoing scientific debates about some of the details. However, some suggest that it is possible to go back further, reconstructing the language that Proto-Indo-European came from, and trying to determine what other language families may have also come from this proto-proto-language family. Though most linguists agree that there simply isn't enough evidence for such a hypothetical reconstructed language, this idea has enjoyed a certain amount of attention in the popular press and has shown up on several magazine covers over the last few decades. While it's

hwæt!

Ninety-two percent of the world's countries have at least one official language. English is the sole official language in 31 nations.

**proto-language**

single parent language from which all members of a language family may have descended

## RPE 14.1

an intriguing idea that may well be true, most agree that there just isn't enough data to go back 50,000 to 100,000 years to reconstruct the language or languages that humans may have been speaking (or signing?).

## A Linguistic Big Bang?

We really have no idea when humans began using language. Most scientists agree there was probably some sort of linguistic “big bang” (50,000 to 100,000 years ago?) that resulted in a change in the structure of the brain, resulting in the ability to acquire language as we know it. Researchers in various other fields have done a great deal of investigation into the questions of when humans began using language and what their speech was like. Paleontologists studying fossils, bones, and artifacts have shed light on early humans' life, giving insight into their possible speech capacity as well. Primatologists try to determine how much humanlike behavior and communication various apes can learn, and come up with theories about how language may have evolved. Neurologists and neurolinguists study the brain to determine the current shape and how it has evolved, comparing this information to that of other primates, for example, and then making hypotheses about language's development in the brain.

A promising piece of evidence has recently emerged that may eventually shed some light onto how human language ability has evolved. In Chapter 2, we discussed a mutation in a gene called FOXP2 that has been shown to lead to deficits in language as well as a loss of control of facial muscles, including those involved in speech production. This gene is only a slightly altered version of a gene found in apes, but it seems to have achieved its present form between 200,000 and 100,000 years ago. Though it is very tempting to call this gene a language gene (indeed, the media has done so, as this research was reported in the popular press over the last few years), but that is oversimplifying. However, further investigation into the human genome is undoubtedly going to reveal more about human linguistic ability.

### hwaet!

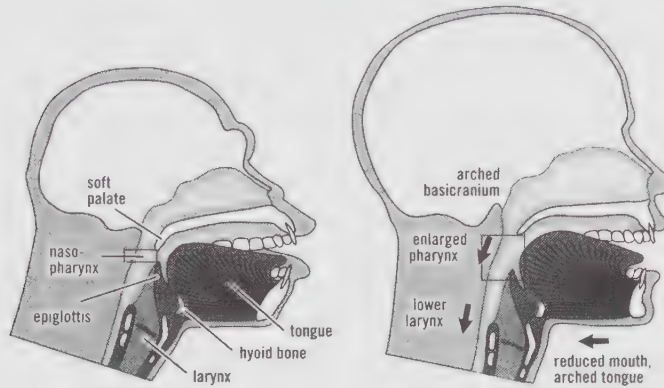
Primatologist Jane Goodall has been studying the behavior, including the communication, of chimpanzees in the wild since 1960. She has received numerous awards and honorary degrees, and the Jane Goodall Institute strives to “advance the power of individuals to take informed and compassionate action to improve the environment for all living things.”

## Why Don't Apes Do It?

Scientists think that humans have adapted genetically to facilitate spoken language. We did this, in fact, at a great cost—an increased risk of choking and greater likelihood of death. For such an evolutionary adaptation to take place, it must have been worth that risky trade-off. The throat—the pharynx—of *Homo sapiens* is elongated compared to that of earlier hominids, and the larynx is lower. The illustrations in Figure 14.1 illustrate these differences that are still present between today's apes and today's humans.

### Figure 14.1 Adaptation of the Pharynx for Language

Source: Figure 11.4, from *The symbolic species: Co-evolution of language and the brain*, by Terrence W. Deacon. Copyright © 1997 by Terrence W. Deacon./Used by permission of W. W. Norton & Company, Inc.



The result of these changes is that our tongues can move forward and backward and up and down in ways that create a great variety of resonant cavities in a lot of different places in the vocal tract. The stretching out and lowering of the pharynx, however, means that the epiglottis can no longer make contact with the soft palate. In primates and extinct hominids, the epiglottis can do so, and this arrangement results in two separate pathways—one for air and one for food and liquid. But in humans, because the respiratory and the digestive tracts intersect at the pharynx, food can become lodged in the larynx, making it impossible to breathe. It is this descent of the larynx, however, that makes us able to produce speech sounds. (And interestingly, human infants are born with the larynx higher in their throats, making it impossible for them to produce speech sounds until they are at least 3 months old.)

Another difference between humans and apes is brain size. This is not, of course, due simply to language, but Ralph Holloway (1983), who researches the evolution of the human brain, discusses how some of the changes in the human brain do correlate with language. Of the four major reorganizational changes that have occurred during hominid brain evolution, three correlate with language: (1) reduction of the visual cortex area with relative increase in the posterior cortex, where Wernicke's area (involved in language comprehension and lexical access) is located; (2) reorganization of the frontal lobe, where Broca's area (involved in syntactic processing and production and speech motor control) is located; and (3) the development of strong lateralization (localization of language in the dominant—typically left—hemisphere of the brain).



Like the changes to the vocal tract that resulted in the risk of choking, the changes in the human brain have had drawbacks as well. Holloway discusses how brain size typically correlates with gestation period—the larger the brain, the longer the gestation. If humans' brain size and weight were consistent with that of other animals, the gestation period would be about 17 months. However, human infants are born at about 9 months, making them, in a sense, quite premature and, therefore, virtually helpless and completely dependent on the mother—a considerable burden, really, but one that we have traded for language (among other benefits). It has been suggested that the premature births of modern humans are due to the shape of the pelvis and the birth canal, which allows us to walk upright. In all nonhuman primates, the birth canal is essentially a straight tube, wider from front to back than from side to side; the newborn's head fits in the birth canal with room to spare, so an ape birth is fairly simple. But the human birth canal is a complex tunnel, and if a human fetus were allowed to complete its brain development in utero, it would be too large to be born! The rapid brain growth that in most primates occurs only before birth continues in infancy for modern humans. Only when a baby is a year old does brain growth slow down; so, in terms of brain development, human gestation lasts 21 months. (Holloway also notes that the ways in which the feet evolved, allowing for bipedalism, meant that the feet could no longer grasp with a thumb-like big toe, which meant big changes for the early human mothers and babies. While ape infants cling to their mothers with muscular hands and grasping toes, the human infants now had to be carried, lessening the mother's ability to provide for herself.) Our large brains, which allowed us language, among other things, and our upright walking ability have resulted in difficult births and helpless infants. Though it has complicated our lives in some ways, the linguistic big bang nevertheless seems to have been a worthwhile evolutionary trade-off.

Many have asked what the course of this pressure for language might have been and why our distant ancestors made such a big investment in talking. Biological anthropologist Terrence Deacon (1997) suggests that the motivation for language was social; that hominid brains and human language coevolved over the past 2 million years, driven by the imperative of "representing a social contract" (p. 401), which was required in order to take advantage of the resources available via systematic hunting and gathering. Evolutionary biologist and anthropologist Robin Dunbar (1998) also suggests that the motivation for language was primarily social, but he claims that it is the need to gossip that is behind language, arguing that gossip became a more efficient substitute for the grooming behavior (you can talk and do other things at the same time) that other primates use to establish and maintain social relationships.

## Language Genesis

The family tree models of language relations allow us to see how groups of languages share certain linguistic features with each other and are thus likely descended from a common parent language. We discussed in Chapter 11 some of the grammatical features of members of the Indo-European language family as well as some of the features and patterns that distinguish the various branches of a family. For example, all members of the Germanic branch of the Indo-European family have a two-tense verbal system (past and present tense, but not aspect, are marked on the verb). That is, in modern English, for example, we can say *walk* and *walked*, but other combinations of tense and aspect must be expressed by a combination of auxiliary and modal verbs: *will have walked*, *could have walked*, *might have been walking*. Non-Germanic branches of the Indo-European family use a single word with distinct affixes to express these semantic variations. It is this difference, along with other distinctions, that has led historical linguists to separate the Germanic language family from the other Indo-European subgroups.

Here, we take another look at some creoles of the world, languages that are not always easily represented in a family tree model because they are “brand-new” languages, though they share features of other languages. Recall from the discussion in Chapter 2 that creole languages are exciting examples of **language genesis**, and because they share so many grammatical similarities (regardless of who speaks them, where they are spoken, or what languages they share features with), they are perhaps a window into the mind, giving us clues to the structure of human language. Creoles can also give us clues to what the earliest language(s) may have been like.

### language genesis

how languages come to be, descending from another language or coming about from language contact and creolization

## Creoles Revisited

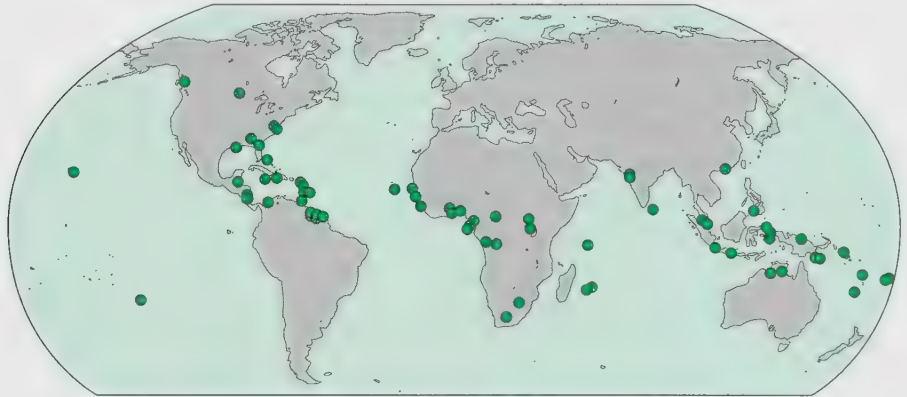
Grammatical similarities across creoles may indicate that the human brain is hardwired to create particular patterns of language. Over time, these similar patterns may change in different ways, but each time a language is created, it tends to follow certain patterns. This idea, however, is met with some skepticism because there often is not a great deal of recorded material on early creoles. Creoles were long thought of as bastardized versions of the superstrate language from which each took much of its vocabulary. Also, the study of creoles was neglected because many creoles were spoken by less powerful, dominated peoples; many pidgins and then creoles arose out of the slave trade.

In the nineteenth century, when slaves from Africa were brought over to North America to work on the plantations, those who spoke the same or related languages were intentionally separated from each other so that the difficulty in communication would make it harder to plan a revolt. Therefore, in order to finally communicate with their peers on the

**Figure 14.2** Creoles Around the World

As a result of colonization, shipping, and trade, many creoles grew up in coastal areas all around the world. This map shows many, but not all, areas where pidgins and creoles are or were spoken.

Source: [http://lingweb.eva.mpg.de/apics/index.php/Image:Creole\\_map1.jpg](http://lingweb.eva.mpg.de/apics/index.php/Image:Creole_map1.jpg)/APiCS/Max Planck Institute



plantations and with their owners, they needed a language. Such languages are thought to be the origin of what have been called Plantation Creole and Gullah, discussed more later. Pidgins also arose because of colonization. Prominent languages such as French, Spanish, Portuguese, English, and Dutch were the languages of the colonizers. The colonizers traveled around the world (see Figure 14.2) and set up ports in coastal towns where shipping and trading routes were accessible, and pidgins formed between the colonists and the indigenous peoples.

The traditional linguistic understanding of a creole is that it has developed from a pidgin (discussed in Chapter 2). The primary way in which this happens is that a child is exposed to a pidgin as a first language and develops it into a fully formed, completely explicit language. This kind of brand-new language is a creole. In contrast to a pidgin, which typically has reduced morphology and syntax, tolerance of considerable phonological variation, reduction in the number of functions for which the pidgin is used (usually not a written language), extensive borrowing from local languages, and much variability across speakers, creoles have all the features of a complete language.

So if adults in a community don't speak a common language, they speak with each other in the pidgin; then the children use it, too, but they fill in all the grammatical and lexical holes. In an amazing demonstration of the hardwired language capabilities that humans possess, children create a complete, new language. Nicaraguan Sign Language (*Idioma de Señas de*

*Nicaragua, ISN*), developed by deaf children, is an example of such a “new” language.

Some of the most thorough descriptions we have of creoles are of the creolized languages of the Caribbean. Creoles often arose on slave plantations where Africans who spoke different languages used pidgins to communicate; their children created creoles such as Haitian Creole, Jamaican English, and Gullah (spoken on the islands off the coast of Georgia and South Carolina).

Because most creoles are spoken in close proximity to a more powerful or dominant language, the original form of the creole is often greatly affected by that dominant language. For example, the creole Gullah, though likely not originally mutually intelligible with English, is now much closer to English in terms of phonology, morphology, syntax, and vocabulary.

Creoles are languages like any other languages; the term *creole* just refers to the way the language came into being and emphasizes its relative youth. A factor in the struggle of creoles to be recognized as legitimate languages is that these young languages do not always have a written form. (But bear in mind that neither do many languages that have been around for thousands of

### Did You Know...?



#### Chinook Jargon

Chinook Jargon was a language used in what is now Oregon, Washington, British Columbia, and Alaska throughout the 1800s. The language takes vocabulary from various tribes of the Pacific Northwest, including the language of the Chinook tribe, with some borrowings from French and English. It was used primarily as a trade language between speakers of different languages, both between Native American groups and between Europeans and Natives. The language is nearly extinct, though it was used well into the twentieth century; its use was documented in Seattle until World War II, according to novelist Nard Jones (1972). It was also a written language, unlike many other pidgins and creoles. In Kamloops, British Columbia, a missionary publication, *Kamloops Wawa*, was published in the language for some twenty years, from the 1890s on. Dictionaries and other texts were also published in the language during that time.

#### For more information

Jones, N. 1972. *Seattle*. Garden City, NY: Doubleday.

Lewis, P. 2009. Chinook Wawa: A language of Canada. In *Ethnologue: Languages of the world*, 16th edn. Dallas, TX: SIL International. Online version: [http://www.ethnologue.com/show\\_language.asp?code=chn](http://www.ethnologue.com/show_language.asp?code=chn).



years.) In many societies today, the writing down of a language has the effect of legitimizing and standardizing it. Recently, speakers of various English-based creoles are choosing to spell words differently from the way they are spelled in their English cousins, to emphasize the different meaning and the fact that it is a part of a distinct language. (Recall *bin* and *bai* of Tok Pisin, discussed in Chapter 2. We'll see more examples in the next section.)

Another way in which creoles are marginalized, even by linguists, is that the family tree method of categorizing language cannot accurately represent the ways in which creole languages develop. Hugo Schuchardt (1885) pointed out in the late nineteenth century that creoles were a problem for the comparative method because one could wrongly reconstruct something like Proto-French-Haitian. That is, if we knew nothing about the history of Haiti, we might assume Haitian Creole and French had a common ancestor when, in fact, Haitian Creole developed because of contact between French and African languages. In the same way, English-based creoles are not technically descendants of English, though they share much vocabulary. Their syntax and morphology is often completely new, so it would not be accurate to represent them on the same family tree. Because of these difficulties in representing them in the family tree model, creoles are often simply left off such tree diagrams, contributing to the notion that they are not real or complete languages.

Let's consider some features of several English-based creoles. We will focus on the complexity of the grammatical systems as well as the similarities among these unrelated languages.

## Jamaican Creole

Slave labor came from Africa to Jamaica in the seventeenth century. An English-based pidgin and then a creole developed. Jamaica was a British colony until 1948, when it gained independence. Some version of Standard English is the official language and is used in schools, though most people speak Jamaican Creole at home. (There is a dialect of English known as Jamaican English, which is distinct from the creole.)

Consider the pronoun system of Jamaican Creole. Although the vocabulary of the pronouns is borrowed from English, they are now distinct, as Table 14.2 indicates.

Jamaican Creole also differs from English in the way tense and aspect are marked. In Jamaican Creole, tense is indicated by *ben* before the main verb. Though *ben* is borrowed from English *been*, it has a distinct meaning and grammatical function in Jamaican Creole.

past tense = *ben* + verb stem

If me *ben waak* huom . . .

'if I *had walked* home . . .'

hwæt!

Jamaica was inhabited by the Arawaks when the Spanish arrived in 1494. The Arawaks were soon all dead, and so was their language.

Table 14.2

## Jamaican Creole and English Pronoun

Person	Jamaican Creole		English	
	Singular	Plural	Singular	Plural
1st	mi	wi	I	we
2nd	yu	unu	you	you
3rd	im/i	dem	he/she/it	they

Aspect, which marks duration, intensity, completion, or frequency of verbs, is indicated in the following examples:

progressive aspect = *a* + verb stem

Why yu *a dhu* out yah?

‘What *are* you *doing* out here?’

completive aspect = *done* + verb stem

Mi jus a *done tell* me two pickney dem seh . . .

‘I *have just* finished *telling* my two children that . . .’

You can see from these few examples that even though much of the vocabulary is borrowed from English, the meanings and grammatical functions of those borrowed words is quite different in Jamaican Creole.

## RPE 14.2

## Hawaiian Creole English

Hawaiian Creole English, known to most Hawaiians simply as “pidgin,” has a long history in Hawaii and has been influenced by many languages, including English, Hawaiian, Portuguese, Chinese (primarily Cantonese), and later by plantation workers who were speakers of Japanese, Tagalog, and Korean. Similar to the grammar of Jamaican Creole, Hawaiian Creole

English marks what is called the anterior tense with *bin*, similar to the past perfect in English, so *bin walk* in Creole would translate to ‘had walked’ in English.

The irrealis aspect (similar to conditional) is marked with *go*. It distinguishes possible actions from actual ones:

irrealis: If I *bin* get car, I go drive home.  
‘If I had a car, I would drive home.’

The habitual aspect, indicating that something occurs regularly, is marked by *stay*:

habitual: I *stay* run in Kapiolani Park.  
‘I regularly run in Kapiolani Park.’

## hwaet!

Hawaii, which became the fiftieth state in 1950, was first inhabited more than 1,500 years ago by Polynesian peoples. It was ruled by a monarchy until 1893, when the last monarch (and the only queen), Lili’uokalani, a speaker of Hawaiian, was deposed.

An interesting feature of Hawaiian Creole English, pointed out by Derek Bickerton (1981), is that it has a way to distinguish actions that have been completed from those that haven't. Consider the following English sentence.

Kai went to Hilo to see Alena.

In English, we don't know whether Kai saw Alena or not, but in Hawaiian Creole, that must be specified.

Kai bin go Hilo go see Alena

means that Kai saw Alena. But

Kai bin go Hilo for see Alena

This means either that Kai didn't see Alena or the speaker doesn't know whether he did or not. Here again, we see that although superficially these English-based creoles seem very similar to English, they are, in fact, quite different grammatically and lexically and can even offer more information and more details than can be expressed grammatically by their English equivalents.

## Tok Pisin

This language, also known as Melanesian Creole or New Guinea Pidgin, is a creole language spoken in Papua New Guinea, where 800 languages are spoken. It is one of three official languages spoken there. (The other two are English and Hiri Motu.) Tok Pisin began as a pidgin when Pacific Islanders, speaking many languages, were sent to work in the sugarcane fields in Queensland, Australia, and other neighboring islands in the late 1800s. The pidgin used much vocabulary from English but had influences from German, Portuguese, and various Austronesian languages. It developed into the primary language of the descendants of these people. There are related creoles elsewhere in the South Pacific: Bislama, spoken in Vanuatu, and Pijin, spoken in the Solomon Islands.

Though about 80 percent of the vocabulary of Tok Pisin is derived from English, many grammatical features of the language are quite distinct from those of English and are also features that Tok Pisin shares with many other creole languages. One example is the **transitivity marker**; like many creoles, Tok Pisin has an affix that indicates transitivity of verbs. So, if a verb can take an object, the suffix *-im* must attach to the verb: *luk* means 'look', but *lukim* means 'to see something' and must be accompanied by a noun phrase. Another feature is the distinction between inclusive and exclusive personal pronouns. For example, Tok Pisin distinguishes between *mipela*, meaning 'we' but excluding the addressee, and *yumi*, meaning 'we' and including the addressee. Tense and aspect are indicated by separate words borrowed from English but exhibiting novel meanings: *bai* indicates future,

**transitivity  
marker** affix that  
indicates transitivity  
of verbs

*bin* indicates past, and the progressive aspect is indicated by *stap*. Reduplicative morphology is another feature of Tok Pisin and of other creoles: for example, a repeated action can be expressed by reduplication of the verb: *tok* means ‘talk’, but *toktok* means to continue talking, and *smalsmal* means ‘very smal’ in Jamaican Creole.

## Gullah and African American English

Gullah, also called Sea Islands Creole, is spoken on the islands off the coast of South Carolina and Georgia. Enslaved Africans continued to arrive at the islands until the early twentieth century; because they were isolated on the islands and thus cut off from the outside world, their language remained fairly distinct. Linguists have speculated that Gullah is an example of the early creoles that many slaves spoke in North America from the 1600s on, and Gullah is likely descended from what linguists call Plantation Creole. The variety of Gullah that is spoken today is for the most part mutually intelligible with English and is, therefore, perhaps best classified as a dialect rather than a creole, though it was most certainly a separate language earlier in its development.

hwaet!

You can take a Gullah tour in Charleston, South Carolina, and learn all about Gullah history, culture, and language from one of their own.

Recall from Chapter 12 that scholars have proposed that African American English (or African American Vernacular English, AAVE) may have originated as a creole. Some of the grammatical features of the language variety spoken by many African Americans are also characteristic of various African languages that would have been spoken by the ancestors of the speakers of the modern variety of the dialect (the use of grammatical aspect, for example). Whether these grammatical features came directly from languages of Africa or came about independently is nearly impossible to prove. There is almost no recorded information on the language that the slaves and their owners spoke. But we can be more certain that the grammar of African American English is distinct from the grammar of other varieties of English; perhaps this is due to its creole origins (where grammatical aspect does often play a larger role).

Table 14.3 compares the aspectual marking of Hawaiian Creole English (HCE) to African American English (AAE). As we discussed in Chapter 2,

Table 14.3

Aspectual Marking in HCE and AAVE\*

	Anterior	Irrealis	Nonpunctual
<b>HCE</b>	<i>bin</i>	<i>go</i>	<i>stay</i>
<b>AAVE</b>	<i>been, done</i>	<i>be gon' be</i>	<i>be steady</i>

\*HCE = Hawaiian Creole English; AAVE = African American Vernacular English



these grammatical markers for anterior, irrealis, and nonpunctual recur in creole after creole, and they do so in the same order. The similarities in these unrelated languages, HCE and AAE, are rather remarkable.

We have seen that pidgins and creoles are new languages. Though they often share features of the superstrate language, these similarities are primarily restricted to lexical borrowings. The process of creolization, however, results in new meanings for that vocabulary and in unique grammatical structures. Watching creoles develop allows us to witness the birth of new languages, and the similarities that exist across unrelated creoles suggest that we may be witnessing the births of languages much as it may have happened tens of thousands of years ago, when it happened for the very first time.

### RPE 14.3

## Language Shift

**language shift** shift of a speech community from speaking one language to another

When a speech community shifts from speaking one language to another, the process is known as **language shift**. Language shift happens for a variety of reasons. You learned in Chapter 12 about the spread of English worldwide and the factors that led to this: first, the power of England as a result of colonial expansion, and then the growth of the United States and its economic and political power. This expansion of English led to the deaths of Native American languages, Australian aboriginal languages, and many languages of the Caribbean, as well as to the decrease in use or loss of Celtic languages in Britain.

Other colonizing languages have had similar effects: Spanish and Portuguese wiped out perhaps hundreds of indigenous languages of Mexico and Central and South America, French colonization in the West Indies and in parts of Canada led to the disappearance of the indigenous languages spoken in those places, and Dutch took over those parts of the Caribbean that were colonized by the Dutch (the Dutch Antilles, the Virgin Islands, and Tobago, as well as parts of South America colonized in the seventeenth and eighteenth centuries). Where there is a colonizing power, there is a language that will become the dominant language.

Though you may be aware that some languages are no longer spoken and are thus “dead,” some of the languages mostly commonly thought of as dead languages didn’t actually die out but slowly changed into other related languages. We look at several examples of language shift in this section, both those with descendants and those without, and examine the causes of the shift.

**endangered language** language in danger of becoming extinct because it has very few remaining speakers

Michael Krauss (1992), an expert on **endangered languages**, has proposed that, in this century, as many as 95 percent of the nearly 7,000 languages currently spoken and signed in the world may become extinct, and that they are dying out at the highest rate ever. The remaining 5 percent

LINGUISTICS  
IN THE NEWSSundance Features *The Linguists*

It's not often (ever?) that linguistics is featured in a major motion picture—but perhaps that trend is beginning to change. *The Linguists*, a documentary film featuring linguists David Harrison and Gregory Anderson, premiered in 2008 at the Sundance Film Festival. The film follows Harrison and Anderson to jungles, mountains, and remote villages in India, Bolivia, and Siberia as they document endangered and disappearing languages. In pursuit of their goal, they encounter fascinating and dangerous circumstances while finding their way through difficult geography and unfamiliar cultural mores.

These two linguists have traveled extensively to interview the last speakers of critically endangered languages. Many of the world's languages (some say half) are in danger of extinction. When a language dies, the knowledge, history, and culture of its speakers is lost to all.

Harrison and Anderson have established the Living Tongues Institute for Endangered

Languages, a nonprofit organization dedicated to the documentation, revitalization, and maintenance of endangered languages.

The National Geographic's Enduring Voices Project, in conjunction with Harrison and Anderson's Living Tongues Institute, identifies what they call language hotspots, the regions of the world with the greatest linguistic diversity, the greatest language endangerment, and the least-studied languages. So far, they have isolated five hotspots: eastern Siberia, northern Australia, central South America, and, in North America, Oklahoma and the Pacific Northwest. When invited, the project assists people in these indigenous communities in their efforts to revitalize and maintain their threatened languages.

News of the team's research and the film *The Linguists* made headlines around the world, appearing in *The New York Times*, *The Washington Post*, *Guardian UK*, and *The Australian*, among many others. Harrison appeared on the

television programs *The Colbert Report* and *Good Morning America*.

The publicity is all in an attempt to raise public awareness about language endangerment and language loss and to document and prevent language extinction.

For more information

Harrison, K. D. 2010. *The last speakers: The quest to save the world's most endangered languages*. Washington, DC: National Geographic Books.

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National Geographic. 2011. Enduring Voices Project. <http://www.nationalgeographic.com/mission/enduringvoices/>.

YouTube. <http://www.youtube.com/enduringvoices>.

will belong to at most twenty language families, and more than half of the remaining languages will belong to just two families, Indo-European and Niger-Congo. How does this rapid language decline happen? In some rare cases, speakers of a language have all died from disease or genocide, as happened with some Native American tribes upon contact with Europeans. More often, languages die gradually as a speech community adopts a language spoken by others.

While it is true that new languages are being born as creoles, they are not emerging nearly as fast as other languages are dying out. And though we

## hwaet!

In January 2008 an earthquake in India killed about 30,000 people who spoke the endangered language Kutchi; now there are only some 700,000 speakers left.

can think of language change as natural—all languages undergo change, and it is difficult to prevent change—language change that results in a language’s disappearance can have powerful cultural consequences. For example, if communities with different languages come together by choice (migration), those languages might affect each other and change. However, when there is colonization, forced assimilation, or some other prohibition against a community’s language, there is a natural reluctance—or even overt resistance—to let go of a language and the accompanying culture.

## Latin

Latin is now considered a dead language because it is not spoken as a native language by anyone. However, it didn’t really die; it simply slowly morphed into Spanish, Portuguese, French, Italian, Romanian, Catalan, and the other Romance languages, much as Old English changed into Present-Day English. At the time these languages were changing, no one would have noticed the shifts any more than we notice today’s language changes (and just as happens today, such changes were likely viewed as language degradation at the time). Thus, Latin is not really an example of language shift as we’ve defined it since it was not replaced by another language. However, we discuss it here because it is a ubiquitous example of a dead language. We’ll contrast its story to that of other dead languages to see the different factors at work.

Latin was a common and widespread language throughout the Roman Empire (including Europe, North Africa, and the Middle East) for many hundreds of years. It was used throughout the Empire as the language of government and law and, in many places, as the language of the common people.

Because literacy was common among citizens of Rome and then throughout its growing empire, the works of Latin authors were read by many. Many of the other languages spoken throughout the Empire did not have written forms, so the fact that Latin had a literary tradition gave it more power.

The Roman Empire collapsed in 476 CE, but Latin continued to be used as a literary language throughout western and central Europe. It wasn’t until the fifteenth century that Latin began to lose its powerful position as the primary language of scholarly work and of religion throughout Europe. It was replaced there by what were slowly becoming the standardized languages of Europe, many of which were languages that descended from Latin (French, Italian, Spanish, Catalan).

Latin was used by the Roman Catholic Church in its religious services and texts until the middle of the twentieth century and is still used in many traditional services all over the world. Latin is one of the official languages of Vatican City and is used in Catholic services conducted there.

Latin was taught in schools in the United States throughout the twentieth century and was, and still is to some extent, one indicator of an educated



citizen. Though its teaching has declined, it is still taught in many schools in the United States and so remains quite “alive” as a second language (though the focus is typically not on speaking it but on the language’s structure and on learning to read and write it).

In English, Latin words and word roots are still used by scientists to name new species and specimens (*Patholops hodgsonii* ‘Tibetan antelope’, named after Hodgson; *Escherichia coli*, a bacterium; *Xenos vesparum*, a type of wasp; *Passer domesticus*, ‘house sparrow’). Many Latinate terms are still used in the law (*affidavit*, *habeas corpus*, *pro bono*, *pro forma*), in academic writing (*ibid.* is the abbreviation for the Latin *ibidem* ‘in the same place’ and is used in bibliographical references to refer to the previous source references; also *etc.*, *emeritus*, and others [or *et al.*!]), and in medicine. In fact, many medical schools recommend their students take Latin to understand the names for diseases, symptoms, and anatomy.

The power of Latin established during the Roman Empire lasted for centuries, long after the Empire itself had disappeared. The fact that Latin has remained for so long has to do with the power of the people who used it, not with anything about the language itself. However, its eventual disappearance as a native language also illustrates that the use of language is driven by who uses it; after the Roman Empire collapsed, the power centers were more localized, and the languages that developed reflect that (French in France, Spanish in Spain, Italian in Italy, and so on).

**RPE 14.4**

## Native American Languages

The native languages of North America are examples of true language shift. The languages didn’t slowly change into other languages; they were almost completely wiped out fairly rapidly. Beginning in the latter half of the nineteenth century, Native American languages were targeted by the U.S. government as part of the “assimilation” of Native Americans. In 1868, a federal commission on making peace with the Plains Indians concluded, “In the difference of language today lies two-thirds of our trouble . . . Schools should be established, which children should be required to attend; their barbarous dialects should be blotted out and the English language substituted” (Atkins 1887). These boarding schools did more than anything else to kill off scores of Native American languages. Students were taken from their homes, often sent hundreds of miles away, and made to attend military-like schools and government-subsidized, church-run mission schools. The students were routinely punished, sometimes quite severely, for speaking their languages. The force that lay behind these prohibitions is readily seen upon reading this statement from the commissioner of Indian affairs, E. A. Hayt, in 1879: “I [have] expressed very decidedly the idea the Indians should be taught in the English language only. . . . There is not an Indian pupil whose tuition is paid by the United States Government who is permitted to study any other



language than our vernacular—the language of the greatest, most powerful, and enterprising nationalities under the sun. The English language as taught in America is good enough for all her people of all races” (cited in Jaimes 1992: 380). Given these attitudes and policies, it is of course no surprise that use of the languages began to diminish, quickly eradicating many languages but also chipping away at the very identity of many Native Americans, alienating them from their cultural roots and from their tribes while also not allowing them full access to the dominant (white) society. The twentieth century saw the death of perhaps hundreds of Native American languages.

James Crawford, a language policy expert, writes that the pressures that induced many Native American tribes to adopt a new language include changes in values, rituals, or economic and political life resulting from trade, migration, intermarriage, religious conversion, or military conquest.

Modern cultures, abetted by new technologies, are encroaching on once-isolated peoples with drastic effects on their way of life and on the environments they inhabit. Destruction of lands and livelihoods; the spread of consumerism, individualism, and other Western values; pressures for assimilation into dominant cultures; and conscious policies of repression directed at indigenous groups—these are among the factors threatening the world’s biodiversity as well as its cultural and linguistic diversity. (Crawford 1995: 22)

In the sections on language revitalization, we will see how some Native American communities have begun to fight—perhaps too late—to save their languages.

## Norman French in England

In Chapter 11, you learned about the Norman Conquest, the conquering of England by the Norman French in 1066. This takeover led to French becoming the language of the ruling class, of the government, and of the courts. Was this an example of language shift? We have learned how the language of power typically becomes the dominant language; why, then, don’t we speak French instead of English? Why didn’t language shift take place for the people of England? We discussed this rise and fall of French in Chapter 11 and the events that led to its eventual demise as the language of England. Recall that William the Conqueror ruled under a feudal system in which there was a huge social and practical division between the French-speaking ruling class and the English-speaking peasants. Despite hundreds of years of rule by the French, English remained the language of the masses. Other practical matters discussed in Chapter 11, such as the Black Death

# Language Alive!

## Esperanto: A Failed Lingua Franca

Esperanto is an invented language, created in the 1870s by Ludovic Zamenhof, an Ashkenazi Jew from what is now Poland. It was developed as a lingua franca for use between speakers of different languages; Zamenhof hoped it would become a language used around the world. He spent years creating the language and then translating literature into the language, as well as writing a grammar book. Throughout the twentieth century, it was taught in schools and universities around the world but did not receive acceptance as an international language. Its grammar and vocabulary are based primarily on various Indo-European languages, and it is intended to be quite easy to learn.

Today, *Ethnologue* reports that there are between 200 and 2,000 Esperanto speakers; it is used in about 115 countries, mostly in Central and Eastern Europe, China, and other countries in eastern Asia, certain areas of South America, and Southwest Asia.

*For more information*

Lewis, M. Paul (ed.). 2009. *Ethnologue: Languages of the world*, 16th ed. Dallas, TX: SIL International. Online version: <http://www.ethnologue.com/>.

Grigorjevskij, A. 2011. Esperanto.net. [http://www.esperanto.net/info/index\\_en.html](http://www.esperanto.net/info/index_en.html).

(which killed both English and French speakers but led to an increase in the number of English speakers in positions of power), eventually led to the demise of French in England.

### RPE 14.5

## Language Planning

Sometimes the use of a particular language is more carefully planned, with official, governmental policies developed to ensure that the language is spoken and/or taught in schools. Such deliberate efforts to influence the selection and promotion of a community's language use and acquisition are known as **language planning**.

Language planning and policy arise out of sociopolitical situations where, for example, speakers of various languages compete for resources or where a particular linguistic minority is denied access to basic rights. One example is the U.S. Court Interpreters Act of 1978, which provides an interpreter to any victim, witness, or defendant whose native language is not English. Another is the Voting Rights Act of 1975, which provides for bilingual ballots in areas where more than 5 percent of the population speak a language other than English (see Robinson 1988 for more information).

### language planning

official (usually governmental) efforts to influence the selection and promotion of a community's language use

Other language planning decisions attempt to meet needs by *reducing* linguistic diversity, as in instances where a language is declared a national language in a multilingual country (such as Bahasa Indonesia, “language of Indonesia”) or where a single language or a single variety of a language is declared the standard or official one to promote linguistic unity in a country where divergent dialects or languages exist. For example, although many dialects of Chinese exist, the promotion of a single variety as the national language (Mandarin) contributes to a sense of national unity.

## English-Only Laws

Contrary to popular belief, the United States does not have an official language. English-only legislation was proposed in 1981 by Senator Hayakawa of California as a constitutional amendment called the English Language Amendment. If approved, it would have banned all uses of languages other than English in federal, state, and local government. However, the measure has never come to a congressional vote. Since then, however, twenty-four states have adopted English as an official language, though many of these laws are simply symbolic, stating that English is the official language of the state.

These various laws and proposed laws regarding making English an official language are quite controversial, sometimes pitting basic rights against linguistic unity. As Robinson (1988) writes,

As the recent proliferation of efforts to legislate problems of language difference attests, language planning is becoming more and more essential in an increasingly multilingual society. A coherent and informed legislative response to the social and political questions raised by the changing composition of the population is needed so that legislators and educators can make informed choices about language policy in areas such as educational policy and access to basic services. (para. 15)

RPE 14.6

RPE 14.7

Did You Know...



### Ketchup-Only Law

In 1996, U.S. House of Representatives delegate Robert Underwood of Guam proposed in a letter to Congress a “ketchup-only” bill, which would make ketchup the national condiment, making it mandatory in government food agencies and prohibiting salsa, soy sauce, and other condiments. It turns out that the bill was a tongue-in-cheek ploy to express his disdain for the English-only bill sponsored by Representative Toby Roth of Wisconsin.

## Language Revitalization

language revitalization attempt to bring back spoken use of a language

If language shift resulting in language death is of concern, then in theory, reviving some of those languages and then maintaining both the dominant language and the threatened language within these communities seems like a good solution to prevent loss of native languages and the accompanying culture. Such attempts to bring back the spoken use of a language that is no longer in daily use are known as **language revitalization**.

What are the benefits and consequences of trying to preserve languages and fend off their disappearance? For linguists, the loss of linguistic data is a great loss of the material for the field of linguistics. This is not trivial, for that data and the consequent analysis of it can be, as Chomsky has put it many times, a partial window on the human mind. The value of preserving languages goes far beyond linguistics. James Crawford writes,

We should care about preventing the extinction of languages because of the human costs to those most directly affected. . . . Along with the accompanying loss of culture, language loss can destroy a sense of self-worth, limiting human potential and complicating efforts to solve other problems, such as poverty, family breakdown, school failure, and substance abuse. After all, language death does not happen in privileged communities. It happens to the dispossessed and disempowered, people who most need their cultural resources to survive. (Crawford 1995: 34–35)

hwyæt!

In 1992, a Turkish farmer's death marked the end of Ubykh, a language from the Caucasus region that had the most consonants on record.

We'll see in this section some of the attempts to revive lost languages or to revitalize languages that are waning, and we'll learn about some issues that affect such attempts.

### Hebrew

Ancient Hebrew, though it was not spoken for about 2,000 years, was able to be revived and modified, resulting in Modern Hebrew; however, because of all the written records and because it remained alive in religious contexts, there was a great deal of material (as well as a unique political and social situation—and a lot of sheer will), enabling the language to again be spoken by children as a first language.

Hebrew had been “dead” for nearly 2,000 years when it was brought back to life in Israel about sixty years ago; it now has several million speakers. Hebrew is a member of the Semitic family of languages, related to Arabic and to a lesser extent Amharic. The language and alphabet go back more than 3,000 years. The language became extinct as a spoken language after about the second century BCE, when Aramaic (a closely related Semitic language) became the dominant language of the Middle



East. However, Jews continued to learn Hebrew as a literary and religious language, even when the Jewish population was scattered by the Romans in the year 70 CE. So, for 2,000 years, Hebrew was not a spoken language. In the late nineteenth century, a Lithuanian-Jewish medical student named Eliezer Perelman (later Ben-Yehuda) became interested in the revival of the Hebrew language and devoted the rest of his life to the cause. He coined nearly 4,000 new Hebrew words based on original Hebrew roots in order to make Hebrew a modern, practical language for everyday usage. The language was adopted by the early Zionist settlers in Palestine around the turn of the twentieth century and became the official language of Israel in 1948 when the state was established. Today, Hebrew is spoken by about 5 million Israelis both in Israel and abroad and is the language of prayer for Jews throughout the world. A native speaker of Modern Hebrew is able to read the Bible (Old Testament) in its original Hebrew much as an English speaker can read Shakespeare. Hebrew is an inspiration to many people trying to revive languages today.

## Welsh

Welsh, spoken for centuries in the southwest of what is now England, has been a threatened language for hundreds of years. Speakers of various Celtic languages existed in England when the Anglo-Saxons invaded in the fifth century. Pushed to the edges of the territory (Wales, Ireland, Scotland, and over to Brittany in France), the Welsh people and its speakers coexisted fairly peacefully with English speakers for hundreds of years. But English, the language of the conquerors, gained the upper hand, and speakers of Welsh decreased steadily over time. Morgan (2001) writes that in 1911 there were nearly a million Welsh speakers, a quarter of whom spoke only Welsh. Today, the half-million speakers of Welsh are all bilingual speakers of Welsh and English. In the latter half of the twentieth century, however, support for both Welsh culture and its language began to develop and have an effect on the use of Welsh in schools and in the public realm (p. 110).

Before the 1950s, language choice was a nonissue for the British government. Schools were run locally, not nationally, so Welsh was used in the areas in which it seemed relevant. However, English was viewed as the language that allowed children to climb up the social ladder, so all official business—legal, governmental, higher education—was conducted in English. World War II brought many non-Welsh-speaking children from other English cities into Wales, and much more intermingling of Welsh and English speakers began to occur. This led to renewed interest in maintaining the Welsh language and culture, and in the 1950s Welsh-speaking primary schools were established; but secondary schools

hwæt!

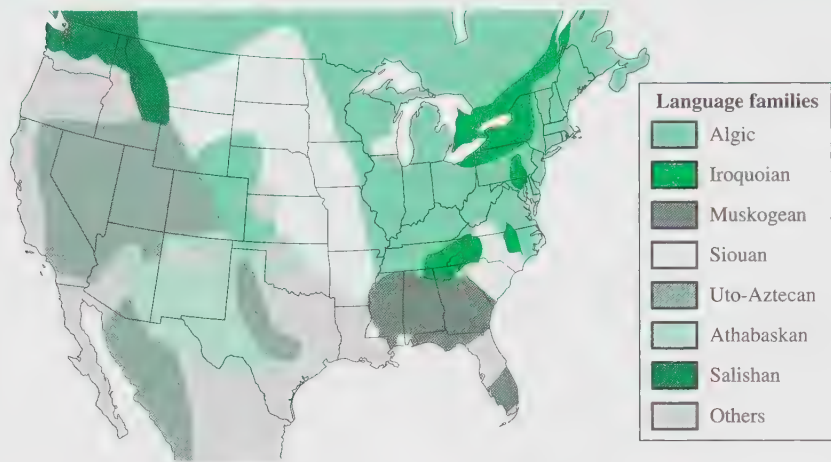
In 2010 linguists discovered a new language, Koro, in northeastern India. Only about 800 people still speak this endangered language.

and higher education still were conducted in English only. Probably the most important milestone in recent history was the Welsh Language Act of 1993, which asserts that Welsh and English are equal by law. Also on the governmental level, *Cymdeithas yr Iaith Gymraeg* (the Welsh Language Society) and *Plaid Cymru* (the Welsh political party) have worked since the 1960s to bring issues related to the Welsh language to public (governmental) attention. *Ethnologue* (Lewis 2009) estimates that 19 percent of the Welsh population now speaks the language, and 33 percent understand it. And Morgan (2001) writes that 80 percent of Welsh-speaking couples bring up their children with Welsh as their first language. The passion and commitment of this tiny part of Britain have led to an increase in speakers (according to the 2001 census) for the first time in a hundred years (p. 112).

## Hawaiian

Hawaii, the isolated island chain in the Pacific, is united by its Polynesian language and culture. Throughout the twentieth century, when Hawaii was first a U.S. territory and then a U.S. state, it was locally controlled politically by multiracial speakers of Hawaiian or Hawaiian Creole English, and the Hawaiian language was given special legal status. However, the power of English has proved very strong indeed, and the number of speakers of Hawaiian has been steadily declining at a rapid rate. According to Wilson and Kamana (2001), a count of traditional native-speaking elders born before 1930 resulted in 200 speakers—fewer than 0.01 percent of the 230,000 native Hawaiians now in Hawaii and fewer than 0.002 percent of the island population of just over a million (p. 148). A small, isolated island, Ni'ihau, however, still has native speakers of the language among its 130 inhabitants. Though Benton (1981) predicted Hawaiian to be the first Polynesian language to be completely replaced by a European language, it is today in a better position than many other Polynesian languages due to the determination and commitment of the 'Aha Punana Leo, an organization that has worked tirelessly for more than twenty years to have Hawaiian fully integrated into K–12 education as the language of instruction. Also, the University of Hawaii at Hilo has a college of Hawaiian language, called Ka Haka 'Ula O Ke'elikolani ('Royal Standard of Ke'elikolani'), which strives to reestablish the Hawaiian language and culture, and all courses are taught in Hawaiian. Though the number of native-speaking Hawaiian children may not be increasing, many children are now coming out of the school system completely fluent in Hawaiian, and the language is being used in daily public functions as well. In the Hawaiian situation, as in other language revitalization programs, it has taken an enormous amount of dedication, commitment, and relentless pressure on education institutions and the government, as well as a lot of money, to begin to turn the language decline around.

Figure 14.3 Native American Language Families in the United States



## Native American Languages

Recall that there used to be hundreds of Native American languages spoken in the United States. Figure 14.3 shows the major language families. Most of the languages are extinct or will be soon. However, in the last couple of decades, interest has increased in preserving or revitalizing many of these languages.

Many Native American communities are trying to bring back a language that no one speaks (at least fluently) anymore, but the challenges these communities face in that task are enormous. In some communities, there are no speakers left. Some have only a few elderly speakers. The languages vary somewhat in how much material has been documented, but they often lack a dictionary or grammatical description of the language. And the languages that do have documentation may not have educational materials to make the often quite technical linguistic description and explanation useful for the classroom. So, although the community may desire to have their children speak the language, it is not easy to accomplish. Teacher training is a huge task that is complicated because remaining speakers of a language often lack academic credentials, while outsiders lack essential cultural and linguistic knowledge. Also, language renewal projects must compete with other, usually more pressing, priorities like health care, education, housing, and economic development.

### Cherokee

The Cherokee Preservation Foundation is trying to bring Cherokee back into the daily lives of its people. The Cherokee's original homelands were in the southern Appalachian Mountains, but in the 1830s, all the Native Americans

living in the South, including the Cherokee, were forcibly removed from their homes and marched as far as a thousand miles south to Oklahoma's new Indian Territory. This march has become known as the Trail of Tears. Today most Cherokee live in eastern Oklahoma, though the Eastern Cherokee maintain their reservation in western North Carolina.

Cherokee, though in danger of becoming extinct, is still one of the healthier languages of Native North America. One reason for its relative health is the number of texts being published in the language. Sequoyah, the son of a Virginia fur trader and a Cherokee chief's daughter, developed a written form of Cherokee (discussed in Chapter 13) in the early 1800s, and there is an established body of literature written in this form today. However, Cherokee suffered the same fate as other Native American languages because of government policies that forced the removal of Cherokee-speaking children from their homes to boarding schools where only English was allowed until the 1950s. *Ethnologue* reports that, today, out of an ethnic population of 308,132, only 130 are monolingual in Cherokee.

The Cherokee Preservation Foundation (<http://www.cherokeepreservationfdn.org/>) is working to change those numbers. The organization raises money for various language preservation programs that teach children and adults to speak and read the Cherokee language. They coordinate language preservation and revitalization programs in preschools and elementary schools, as well as developing teacher education programs to prepare teachers to teach the language while becoming fluent themselves. They are also at work on curriculum materials for use at all levels.

## Lushootseed

Lushootseed is a member of the Salish language family, which is spread throughout the Pacific Northwest and lower British Columbia. It is a nearly extinct language; there are, perhaps, six speakers left, all in their 80s and 90s. Vi Hilbert (see “Did You Know . . . ? Language Preservation in Action”) was an elder in the Upper Skagit tribe in northwestern Washington who worked tirelessly for almost forty years to document her language. Largely because of her work and her willingness to share it, there is renewed interest in the language at local reservations (Tulalip Elementary School on the Tulalip Reservation in Marysville, Washington; Chief Leschi School on the Puyallup Reservation; and Muckleshoot Tribal School on the Muckleshoot Reservation near Auburn, Washington, all have incorporated

Lushootseed into their curricula). Many local tribes throughout Washington State have developed language programs aimed at both documenting what is left of the languages and teaching the language to children. Though Lushootseed and other members of the Salish family are not likely to ever have native speakers again, the efforts to document, promote, and teach the language will

hwæt!

The last speaker of Nooksack, a Salish language in Washington state, died in 1977.



## Did You Know...?



## Language Preservation in Action

Vi Hilbert, one of the last speakers of Lushootseed, died in December 2008. She worked for some forty years recording, documenting, and transcribing her language. In the 1960s, she began working with linguist Tom Hess (of the University of Victoria, British Columbia) to become literate in her language. She worked with Hess to develop teaching materials, and she taught the language at the University of Washington. She then worked with numerous schools to document and revitalize the language through teaching the language and sharing the tribe's culture, history, and stories. In 1989, Hilbert was named a Washington State Living Treasure and received a National Heritage Fellowship from the National Endowment of the Arts, which was presented to her by President Bill Clinton. A nonprofit organization she founded can be found at <http://www.lushootseed.org/>.

allow members of the community to retain a part of their culture. You can see some of the Lushootseed teaching and how it is integrated throughout the curriculum of one school by visiting the Tulalip Elementary School site: <http://www.msvl.k12.wa.us/elementary/tulalip/home.html>.

## Navajo

Navajo is perhaps the single Native American language whose extinction is not imminent. However, its use has been declining continually for the past 50 years. *Ethnologue* (Lewis 2009) reports that of 178,000 Navajos (in the 2000 census), 7,616 were monolingual in Navajo. They also report that first-language speakers among first graders were 30 percent in 1998 compared to 90 percent in 1968. Despite this rapid decline, the language revitalization and maintenance programs on this large reservation are active and enjoying a great deal of success in fluency among second language learners. Part of the reason that Navajo is ahead of some other Native American languages in terms of maintenance of the language is an early and continuing emphasis on literacy. Robert Young and William Morgan published a Navajo dictionary in 1943, and they also published a monthly newspaper in Navajo into the 1950s. The emphasis on literacy led to the publication of a number of children's books during this time as well. Navajo also became celebrated during and following World War II because of the Navajo codetalkers, and it became somewhat easier to acquire public funds to aid in school programs. Another reason for the relative success of the maintenance of Navajo language is the foresight demonstrated at Rough Rock Demonstration School

(discussed in Hale 2001), which embraced the idea in 1966 that Navajo children should be educated in their native language. Children were therefore taught in Navajo, and the school was used as a model for other successful programs in places as far away as Australia. In spite of all these positive steps, the 1950s Indian language eradication programs mentioned previously took their toll on Navajo as well, and Navajo is still fighting its way back. There are several dual-language and Navajo immersion programs spread throughout the Navajo territory; Diné College in Shiprock, New Mexico, on the Navajo reservation, has a Navajo Language Program in which students can receive an associate's degree in Navajo Language (<http://www.dinecollege.edu/cds/>).

## Accent on What Linguists Can Do

By now it's clear to you that some solid knowledge of linguistics can be professionally advantageous. There are loads of possibilities. Here's a roundup of some things we've mentioned.

- **Computer industry:** Linguists work on speech recognition, search engines, and artificial intelligence.
- **Higher education:** A graduate degree in linguistics allows you to teach in college departments of linguistics, philosophy, psychology, speech/communication sciences, anthropology, English, computer science, and foreign languages. At the university level, many applied linguists are involved in teacher education and educational research.
- **Education:** People with a background in linguistics and education develop curricula and materials, train teachers, and design tests and other methods of assessment, especially for language arts and second language learning.



Courtesy of Apple



Monkey Business Images/Shutterstock.com

- **English as a Second Language:** To teach ESL in the United States, you will probably need additional training in language pedagogy, such as a master's degree in education or TESOL. Many teaching positions abroad require only an undergraduate degree, but at least some specialized training in the subject will make you a much more effective teacher. Linguistics can give you a valuable cross-language perspective.
- **Translation or interpreting:** Skilled translators and interpreters are needed everywhere, from government to hospitals to courts of law. A high level of proficiency in the relevant language(s) is necessary, and specialized training may be required. Nonetheless, linguistics can help you understand the issues that arise in communicating across languages.
- **Language documentation or fieldwork:** A number of projects and institutes around the world are looking for linguists. Some organizations engage in language-related fieldwork,

*(continued)*

including documenting endangered languages, conducting language surveys, establishing literacy programs, and translating documents of cultural heritage. This is a great way to interact with speakers of diverse languages representing communities around the world.



Farah Noshi/  
Getty Images

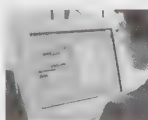
- Teaching a foreign language: Students will benefit from your knowledge of language structure and your ability to make certain aspects of the language especially clear. You will need a high level of proficiency in the relevant language and possibly additional training.
- Publishing: The verbal skills and knowledge that linguists develop are ideal for numerous positions in editing, publishing, and writing.
- Testing agency: Linguists help prepare and evaluate standardized exams and conduct research on assessment issues.
- Dictionaries: Knowledge of phonology, morphology, historical linguistics, dialectology, and sociolinguistics is key to becoming a lexicographer.
- Consultant on language in professions (e.g., law, medicine): Forensic linguistics involves studying the language of legal texts, linguistic aspects of evidence, issues of voice identification, and so on. Agencies such as the FBI and police departments, law



American Copy  
Editors Society



Erim McKean



LAIF/Redux

firms, and the courts hire linguists for these purposes.

- Product naming: Companies that name products do extensive linguistic research on the associations that people make with particular sounds and classes of sounds.
- Government: The federal government hires linguists for the Foreign Service, the FBI, and so on.
- Acting or training actors: Actors need training in pronunciation, intonation, and different elements of grammar to sound like real speakers of a language or dialect. They may even need to know how to make mistakes to sound like an authentic nonnative speaker.



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Alamy



Courtesy of Andrew  
Jack

The skills and abilities of those who major in linguistics are being recognized by many employers and professional schools. Studying linguistics develops critical thinking, careful analysis, research skills, and powerful communication skills. It's the best possible major!

#### For more information

- The Linguist List. 2011. <http://www.linguistlist.org/>. (large, searchable site for all things linguistic; includes job postings)
- Macaulay, M., & K. Syrett. Why major in linguistics? Linguistic Society of America. <http://www.lsadc.org/info/ling-faqs-whymajor.cfm>.

## Summary

This chapter has given you the “big picture” of language, bringing together many of the themes and concepts discussed throughout this book. We have seen that the entire life cycle of a language—language birth, language and dialect endangerment, language death, language maintenance and

survival—is affected by people and the choices we make. While many questions about language (its origins in humans, and why only in humans, for example) remain hard (and maybe impossible) to answer, what we do know is that the more we learn about language, the better equipped we are to make informed rather than discriminatory decisions about our own language and the language(s) around us.

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## Review, Practice, and Explore

### RPE 14.1 Language Origins

Research the language origin stories of a culture other than your own. What do the stories about where language comes from tell us about the culture itself and about language? Some to consider are the myths of Bantu, Hindu, Ancient Greek, or Aztec cultures.

### RPE 14.2 Cape York Creole Pronouns

Consider the following data illustrating some aspects of the pronominal system of Cape York Creole, an English-based creole spoken in Australia. Using these data to illustrate your point, present an argument to someone who claims that this creole is just bad English.

**dual and plural, 2nd and 3rd persons**

dual, 2nd person	yutu (pela)
dual, 3rd person	tupela
plural, 2nd person	yu (pela)
plural, 3rd person	ol, dempela

**dual and plural pronouns, 1st person**

dual, inclusive	yumi, yumtu (speaker plus one addressee)
dual, exclusive	mitu (speaker plus one other, not the addressee)
plural, inclusive	mipela, wi (speaker plus addressee)
plural, exclusive	mitupela, wi (speaker plus others, not addressee)

- If A says to B, “*Yumi go nau*,” A is saying that the two of them will go but not C.
- If A says to B, “*Mitu go nau*,” A is saying that A and C will go but not B.
- If A says to B and C, “*Mipela go nau*,” A is saying that all three of them will go.

**RPE 14.3 Creole Transitivity Markers**

Many unrelated creoles have a grammatical marker for *transitivity* (marked TRN below); that is, if a verb is transitive, the transitive morpheme must be attached. Consider the transitivity markers in the following languages.

**Solomons Pidgin**

luk	‘look’
lukim	‘see something’
hamar	‘pound, hammer’
hamarim	‘pound, hammer something’
sut	‘shoot’
sutim	‘shoot something’

Mi no luk-im pikipiki bulong iu  
 I no see (TRN) pigs belong you  
 ‘I didn’t see your pigs.’

And the same sentence is ungrammatical if the transitivity marker is not attached:

\*Mi no luk pikipiki bulong iu.

**Kwaio (an Oceanic creole language)**

aga	‘look’
agasi	‘see something’
gumu	‘pound, hammer’
gumuri	‘pound, hammer something’
fana	‘shoot’
fanasi	‘shoot something’

Conduct some research to find another creole language that uses a transitivity marker. Illustrate with examples. Then, using these data, construct an argument for someone who claims that creoles are simplified and/or illogical versions of a more standardized language. (Data from Keesing 1988: 119)

#### RPE 14.4 Latin Lives On

Look up the following Latin words and phrases, and determine original Latin meanings of at least six. Have the meanings changed, or do they hold their original meanings in Present-Day English?

ad infinitum, alter ego, alumni, A.D. (anno Domini), bona fide, circa, de facto, e.g. (exempli gratia), ergo, extant, facsimile, in vitro, inter alia, m.o. (modus operandi), nota bene (n.b.), per capita, per se, post mortem, pro bono, pro forma, quorum, re, sic, status quo, subpoena, tabula rasa, terra firma, veto, vice versa

#### RPE 14.5 Language Death

Using *Ethnologue* (<http://www.ethnologue.org>) and other sources, conduct some research to discover at least five languages that have fewer than one hundred speakers and therefore may soon be extinct. Determine which language has replaced the endangered language. What factors led to that replacement? Summarize your findings.

#### RPE 14.6 English-Only Laws

Many websites are devoted to the pros and cons of the English Only/Official English movement (some are listed here). Research the pros and cons of the English Only movement. What are the central arguments for each position? Which arguments are supported by statistics and research, and which are based on social attitudes about language and national identity? Where do you stand on this issue and why?

U.S. English: <http://www.us-english.org/>.

James Crawford's website: <http://www.languagepolicy.net/archives/home.htm>.

English First: <http://www.englishfirst.org/>.

English Plus: <http://www.massenglishplus.org/mep/engplus.html>.

Pro-English: <http://www.proenglish.org/notenglishonly.html>.

Center for Applied Linguistics: <http://www.cal.org/resources/digest/lewell01.html>.

Linguistic Society of America Resolution, drafted by Geoff Nunberg: <http://www.lsadc.org/info/lsa-res-english.cfm>.

#### RPE 14.7 English as a Second Language

Using *Ethnologue* (<http://www.ethnologue.org>) and other sources, conduct some research to discover at least five countries in which English is an official language but is not a native language of most speakers. Determine, if you can, what factors have led to the prominence of English in these countries.

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Figure 1.1, p. 16

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### Chapter 2

pp. 31, 42, 57

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Drawings, p. 34

Berko-Gleason, J. 1958. The child's learning of English Morphology. *Word*, 14, 150–177; Jean Berko-Gleason. Reprinted by permission.

p. 40

Table 52, Page 358 “Acquisition order (children's) and frequencies for the 14 morphemes plus passives and perfectives in the three sets of parents” reprinted by permission of the publisher from *A First Language: The Early Stages* by Roger Brown, p. 358, Cambridge, Mass.: Harvard University Press, Copyright © 1973 by the President and Fellows of Harvard College.

p. 42, Table 2.2

Data from Lenneburg, E. 1967. *Biological Foundations of Language*. New York: Wiley.

p. 52, Table 2.3

Source: From Bickerton, D. “Creole Languages.” In V. Clark, P. Escholz, & A. Rosa (eds.), *Language: Introductory Readings*, 4<sup>th</sup> edn. New York: St. Martin's.

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“Grammar Alive,” from *Non-Native Speakers in the English Classroom* by B. Haussamen et al., 2003. Reprinted by permission of National Council of Teachers of English.

p. 67

“Creole Grammar,” from page 65 from Honda, Maya / O'Neil, Wayne, *Thinking Linguistically: A Scientific Approach to Language*, November 2007. Wiley UK. Used with permission.

Data from Curtiss, S. 1977, “Genie: A Psycholinguistic study of a modern-day “wild child” (perspectives in neurolinguistics and psycholinguistics).” NY: Academic Press, p. 31.

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pp. 69, 83, 85(2), 91, 94, 101

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p. 74, Table 3.1, Table 3.2

Source: The International Phonetic Alphabet, International Phonetic Association (Department of Theoretical and Applied Linguistics, School of English, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece)

Source: The International Phonetic Alphabet, International Phonetic Association (Department of Theoretical and Applied Linguistics, School of English, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece)

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Data from William Labov, “The Organization of Dialect Diversity in North America.” Paper presented at the Fourth International Conference on Spoken Language Processing, Philadelphia, PA, October 6, 1996.

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Data from William Labov, “The Organization of Dialect Diversity in North America.” Paper presented at the Fourth International Conference on Spoken Language Processing, Philadelphia, PA, October 6, 1996.

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### Chapter 5

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pp. 177

“How I Met My Wife” by Jack Winter as appeared in *The New Yorker*, July 25, 1994, p. 82. Reprinted by permission.

p. 176–177

From Tolkien, J.R.R. 1999. *The Fellowship of the Ring*. Boston: Houghton Mifflin.

### Chapter 6

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A. *Chickamauga* by Charles Wright, p. 44 (New York: Farrar, Straus and Giroux, 1995); B. *Chickamauga* by Charles Wright, p. 47 (New York: Farrar, Straus and Giroux, 1995); C. *Meditation on Song and Structure* by Charles Wright, p. 120 (New York: Farrar, Straus and Giroux, 1997); D. *Negative Blue* by Charles Wright, p. 120 (New York: Farrar, Straus and Giroux, 1997); E. *A Short History of the Shadow* by Charles Wright, p. 7 (New York: Farrar, Straus and Giroux, 2002); F. *The World of the Ten Thousand Things* by Charles Wright, p. 132 (New York: Farrar, Straus and Giroux, 1990) Adapted from Source Book for Linguistics, by William Cowan and Jaromira Rakusan. John Benjamins Publishing Company, Philadelphia/Amsterdam. 1985. p. 79. Adapted from Source Book for Linguistics, by William Cowan and Jaromira Rakusan. John Benjamins Publishing Company, Philadelphia/Amsterdam. 1985. pp. 88–89. From Mithun, M. 1999. *The Languages of Native North America*. Cambridge: Cambridge UP, p. 366, 38.

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From *The Navajo Verb System* by Robert W. Young, pp. 3–7. Copyright © 2000. Reprinted by permission of the University of New Mexico Press.

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Oxford English Dictionary

### Chapter 7

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From Millward, C. M. *A Biography of the English Language*, 2nd edn. © 1996 Heinle/Arts & Sciences, a part of Cengage Learning, Inc. Reproduced by permission. [www.cengage.com/permissions](http://www.cengage.com/permissions).

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Vol. 1, Book 3, Ch. 8, p. 148 from *Don Quixote de la Mancha* by Miguel de Cervantes, translated by T. Smollett. Copyright © 1986. NY: Farrar, Straus and Giroux.

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Jabberwocky

### Chapter 8

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Short paragraph (paragraph 27) from brochure by Roberts, S. 1992. “11 Ways to Improve Your Writing and Your Business.” Greensboro, NC: The Roberts Group. <http://www.editorialservice.com/11ways.html>

### Chapter 9

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Quotes from Mrs. Malaprop

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“What Did?” from *A Light in the Attic* by Shel Silverstein. Copyright © 1981 by Evil Eye Music, Inc. Used by permission of HarperCollins Publishers.

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“The Bells,” Edgar Allen Poe from <http://tiger.uic.edu/~rramakri/Readings/Fun/Mixed-Metaphors.html>.

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Verses from Browning, R., 1888, from *The Pied Piper of Hamelin*. NY: Frederick Warne & Co.

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Source: Grice 1989.

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“Linguistic etiquette” from *Readings in the Sociology of Language* by Joshua A. Fishman. Copyright © 1968. Published by Walter de Gruyter. Reprinted by permission of the author.

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Harada 1976: 514.

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## Chapter 11

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Source: Lewis, M. P. (ed.). 2009. *Ethnologue: Languages of the World*, 16<sup>th</sup> edn. Dallas, TX: SIL International. Online version: <http://www.ethnologue.com/> Used by permission of SIL International.

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Excerpts from Johnson, Samuel, 1755, *The Dictionary of the English Language*. London: Richard Bentley.

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## Chapter 13

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From Trigiani, A. *Big Stone Gap*. NY: Ballantine Books.

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# Glossary

**accusative case** case typically assigned to direct object noun phrases

**acronym** word formed from abbreviations of other words

**affix** bound morpheme, including prefixes, suffixes, infixes, and circumfixes

**agglutinative language** language whose words have several morphemes that attach to a root morpheme, and each morpheme has only one distinct meaning

**agrammatism** disorder caused by trauma to Broca's area such that word order does not conform to grammatical rules of the language

**allegro speech** informal respelling of a word

**allophone** predictable phonetic variant of a phoneme

**alphabet** system of writing based on individual sounds

**amelioration** shift of words' meanings over time from neutral or negative to positive

**analogy** learning rules and applying them to other similar expressions; learning through comparison

**analytic language** language in which syntactic relations are expressed primarily by word order rather than by inflectional morphemes attached to words

**analytic sentence** sentence that *must* be true regardless of real-world facts

**anomaly** deviation from expected meaning

**antecedent** phrase to which a proform refers; antecedents can be linguistic (spoken, written, or signed) or pragmatic (interpreted from context)

**antonyms** words that we think of as opposites, though oppositions may be relational (*doctor/patient*), complementary (*alive/dead*), or gradable (*hot/cold*)

**aphasia** language disorder resulting from trauma to the brain

**arguments** set of phrases that occur with a verb and are assigned certain semantic roles by the verb

**argument structure** set of arguments of a verb and their syntactic categories

**articulators** parts of the human body involved in speech production: tongue, teeth, lips, glottis, velum, vocal folds

**aspiration** puff of air that accompanies the initial voiceless consonants in such words as *pat* and *tick*

**assimilation** process of making one sound more like a neighboring one with respect to some feature

**auxiliary verb** form of *have*, *be*, or *do* that occurs in Aux, a syntactic position preceding V

**backformation** making a new word by omitting what appears to be a morpheme (usually a suffix or prefix) but actually isn't

**bilingualism (bilingual language acquisition)** native ability to express oneself in two languages, acquired simultaneously, usually at a very young age

**biological gender** masculine or feminine inflection that expresses biological gender of the object a word represents (*him/her*)

**Black Death (1348–1351)** bubonic plague, carried by rodents (and their fleas), which wiped out two-thirds of the population of Europe

**blend (portmanteau)** word made from putting parts of two words together

**bound morpheme** morpheme that must attach to another morpheme

**bound root morpheme** a non-affix morpheme that cannot stand alone

**broadening** change in words' meanings over time to more general or inclusive

**Broca's aphasia** form of aphasia characterized by labored speech and general agrammatism (see also *Wernicke's aphasia*)

**clause** syntactic phrase made up of at least a subject (NP) and a predicate (VP)

**clipping** making a word by omitting syllables in an existing word (e.g., *rad* from *radical*)

**closed class** category of words that does not accept new members (determiners, auxiliary verbs, and conjunctions, among others)

**coda** consonant(s) at the end of the rime

**codeswitching** switching between two languages during one conversation

**cognates** words (with the same basic meaning) descended from a common ancestor; *two*, *deux* (French), and *zwei* (German) are cognates

**coining (neologism)** recently created word; typically refers to a word not derived from existing words

**comma splice** writing error in which two or more independent clauses are joined with a comma rather than a period

**community of practice** group whose members come together and share activities, beliefs, and perceptions

**comparative method** technique of linguistic analysis that compares lists of related words in a selection of languages to find cognates, or words descended from a common ancestor

**complement** phrase that combines with a head to form a larger phrase

**compounding** combining one or more words into a single word

**consonant** sound characterized by closure or obstruction of the vocal tract

**constituent** group of words that forms a larger syntactic unit

**content words** words with lexical meanings (nouns, verbs, adjectives, adverbs)

**continuum of language varieties** grammars that share enough of a historical and grammatical relationship to be recognized as varieties of one language

**contradiction** sentence that can't be true

**conversion** change of a word's syntactic category without changing form, such as a noun becoming a verb

**coordination** joining phrases (of the same category, usually) with a conjunction (*for*, *and*, *nor*, *but*, *or*, *yet*, and *so*)

**creole** native language with full grammatical complexity that develops (over time) from a pidgin

**critical period for language acquisition** early childhood to prepuberty; according to some, the

best, maybe only, time in which humans can acquire a first language

**Danelaw** northern region of England decreed by King Alfred and the Danes to be a legitimate Norse settlement under Norse, not English, law

**dative case** case typically assigned to indirect object noun phrases

**dead metaphor** metaphor that is so common that it goes unnoticed as a metaphor (*I see your point.*)

**decreolization** process by which a creole language becomes more like the superstrate language

**deep structure** clause in its base word order (in English, SVO) before syntactic rules such as movement or deletion apply

**definiteness** means by which the speaker indicates to the hearer that they share knowledge of the referent of a particular noun phrase

**deictic words** words whose meanings can be interpreted only with reference to the speaker's position in space and time (context); the noun *deixis* refers to the pointing or specifying function of such words

**deletion** process by which constituents are deleted in a sentence under certain syntactic conditions; process causing a segment present at the phonemic level to be deleted at the phonetic level of a word

**derivational affix** affix that attaches to a morpheme or word to derive a new word

**descriptive grammar** set of grammatical rules based on what we say, not what we *should* say according to some language authority

**descriptive linguists** researchers whose main interest is in observing and cataloguing languages

**design features of language** proposed by Hockett, the features that distinguish human language from other communication systems

**dialect** variety of a language that has unique phonetics, phonology, morphology, syntax, and vocabulary and is spoken and understood by a particular group

**dialectologist** sociolinguist who focuses on cataloguing and mapping dialects

**dichotic listening** method of testing processing of linguistic stimuli, wherein people hear different sounds in two ears simultaneously

**diphthong** two-part vowel sound consisting of a vowel and a glide in one syllable

**direct speech act** utterance whose meaning is the sum of its parts; the literal meaning

**dissimilation** process causing two neighboring sounds to become less alike with respect to some feature

**do insertion** insertion of pleonastic *do* into empty Aux to form questions, tags, or negative sentences

**ease of articulation** making something easier to say

**emoticon** typographic symbol or combination of symbols used to convey emotion: :-)

**empiricism** philosophy based on the idea that we gain knowledge not through reason but through experience and that the mind starts out as a blank slate

**endangered language** language in danger of becoming extinct because it has very few remaining speakers

**entailment** inclusion of one aspect of a word's or sentence's meaning in the meaning of another word or sentence

**eponym** word that comes from the name of a person associated with it

**etymology** historical origin of a word

**euphemism** word or phrase used to avoid offending or to purposely obscure (*collateral damage* for 'civilian deaths')

**exchange error (spoonerism)** common type of slip of the tongue involving the exchange of one part of a syllable for another in two different words

**expletive infixation** process by which a morpheme is inserted between other morphemes: *abso-bloomin'-lutely*

**eye dialect** intentional nonstandard spelling that reflects character more than pronunciation

**figurative language** nonliteral language, language that shifts meaning from the primary meaning of the word

**flap** manner of consonant articulation similar to a stop, but with no air pressure build-up and therefore no air release

**free morpheme** morpheme that can stand alone as a word

**fronting** process causing a segment produced in the back of the mouth to change to a segment produced at the front of the mouth

**function words** words with functional meanings (determiners, auxiliary verbs, etc.)

**fused sentence** see *run-on sentence*

**fusional language** language in which morphemes have more than one meaning fused into a single affix

**gapping** deletion operation that applies in coordinate clauses (*Sam likes halibut, and Cary, salmon*)

**General American** idealized variety of English that speakers perceive as neutral, with few stigmatized forms or regionalisms

**generative grammar** system of grammatical rules that allow speakers to create possible sentences in a language

**genitive case** case typically assigned to possessive noun phrases

**grammar** linguistic rule system that we use to produce and understand sentences

**grammatical function** function of a phrase in the sentence as subject, direct object, indirect object, and so on

**grammatical gender** masculine, neuter, or feminine inflection realized on words that has no relation to biological gender

**graphotactic** related to the spelling and writing system

**Grice's cooperative principle** assumption that in conversation speakers will make a sincere effort to collaboratively exchange information

**Grice's maxims of conversation** rules of conversation that describe the shared rules speakers use in interactions; they include *quantity*, *quality*, *relevance*, and *manner*

**Grimm's Law** system of regular sound correspondences, discovered by Jacob Grimm, that distinguishes Germanic languages from others in the Indo-European family; also called the First Sound Shift

**head** word whose syntactic category determines the category of the phrase

**hierarchical structure** property of structure of words and phrases, which are constructed in levels; property of phrase structure whereby one phrase is contained inside another: one phrase dominates another phrase

**historical linguistics** study of how languages change over time

**homographs** words that have the same spelling, different meanings, and different pronunciations (*bow/bow*)



**homonyms** words with the same sound and spelling but different, unrelated meanings (*saw/saw*)

**homophones** words that do not share the same spellings or meanings but sound the same (*sole/soul*)

**honorifics** grammatical forms, usually words or affixes, that express the relative social status of the speaker to the addressee

**hyponym** word whose meaning is included, or entailed, in the meaning of a more general word (*tulip/flower*)

**hypotaxis** subordinate clause structure

**ideogram** symbol that represents an idea

**idiom** collocation of words or phrases with nonliteral meaning (*kick the bucket* = die)

**independent clause** clause that is not contained in another constituent

**indirect speech act** utterance whose meaning depends on context rather than on literal meaning

**infinitive** base form of the verb, in English preceded by *to* (*to walk*)

**inflectional affix** affix that adds grammatical information to an existing word

**initialism** word formed from the initial letters of a group of words

**insertion** process causing a segment not present at the phonemic level to be added to the phonetic form of a word

**interlanguage grammar** intermediate grammar that is influenced by both a person's native and second languages

**intonation** variation in pitch across an utterance

**intonation nucleus** most prominently stressed syllable in an utterance

**isogloss** geographical boundary of a particular linguistic feature

**jargon** specialized vocabulary associated with a trade or profession, sport, game, etc.

**language acquisition** natural, unconscious process of language development in humans that occurs without instruction

**language genesis** how languages come to be, descending from another language or coming about from language contact and creolization

**language learning** process of gaining conscious knowledge of language through instruction

**language planning** official (usually governmental) efforts to influence the selection and promotion of a community's language use

**language revitalization** attempt to bring back the spoken use of a language no longer in daily use

**language shift** shift of a speech community from speaking one language to another

**language variation** language change in progress, such as the Northern Cities Vowel Shift

**langue** in structural linguistics, the set of organizing principles of signs, including rules of combination

**lateralization** idea that cognitive functions reside in or are controlled by either the left or the right side of the brain

**lexical ambiguity** word or phrase that has more than one meaning

**lexical semantics** formal study of the conventions of word meaning

**lexicon** our mental dictionary; stores information about words and the lexical rules we use to build them

**linguistic competence** unconscious knowledge of grammar that allows us to produce and understand a language

**linguistic parameters** binary ("on/off") settings of universal grammatical principles proposed to account for differences among languages

**linguistic performance** the language we produce, including slips of the tongue and other missteps

**linguistic relativity** theory that language and culture influence or perhaps even determine each other

**linguistic savant** person who is linguistically gifted but whose other cognitive abilities are below average

**linguistics** the scientific study of language

**linking verb** verb that "links" the subject of the sentence with a phrase that describes it, usually an adjective phrase

**loanwords** words borrowed into a language from another language

**localization** theory that different parts of the brain are associated with or control particular behaviors and functions

**logical connectives** words that express logical relationships, such as *either*, *or*, and *if*

**logogram/logograph** symbol that represents a word or a morpheme

**main verb** verb that occurs under V and is the head of a VP (verb phrase)

**markedness** opposition in meaning that differentiates between the typical meaning of a word and its “marked” meaning or opposite (*right* is unmarked, and *left* is marked)

**metaphor** nonliteral meaning of one word or phrase describes another word or phrase (*My car is a lemon.*)

**metonymy** description of something in terms of something with which it is closely associated: *The pen is mightier than the sword* (*pen* = the written word/diplomacy, *sword* = violence/force)

**minimal pair** pair of words that differ only in one sound in the same position (*pit*, /pit/, and *bit*, /bit/)

**mixed metaphor** metaphor that comprises parts of different metaphors: *hit the nail on the jackpot* combines *hit the nail on the head* and *hit the jackpot*

**modal verb** class of verbs (*can/could*, *may/might*, etc.) that occur in Aux

**modification** adjustment, change, and modification of grammatical systems based on various social factors

**monomorphemic** consisting of a single (free) morpheme

**morpheme** smallest unit of meaning in a word

**morphological typology** classification of languages according to common morphological structures

**morphology** study of the system of rules underlying our knowledge of the structure of words

**movement** syntactic operation by which phrases can be rearranged in a sentence under specific conditions or constraints

**mutually intelligible** language varieties that can be understood by speakers of the two (or more) varieties

**narrowing** change in words’ meanings over time to more specific meanings

**nasalization** production of a speech sound with the velum lowered so that most of the airflow passes through the nose rather than the mouth

**natural class** set of sounds that have certain phonetic features in common

**negation** causing a statement to have the opposite meaning by inserting *not* between Aux and V

**negative politeness** politeness strategy based on speaker’s minimizing imposition on the addressee

**neologism** see *coining*

**neurolinguistics** study of the mechanisms of the brain that underlie how we acquire, produce, and understand language

**nominative case** case typically assigned to subject noun phrases

**nucleus** vowel that is the minimum unit of the rime

**number** singular, plural, or other (dual) inflection

**nyms** meaning relationships among words—antonyms, synonyms, homonyms, etc.

**onomatopoeia** use of a word for which the connection between sound and meaning seems nonarbitrary because the word’s sound echoes its meaning

**onset** consonant(s) at the beginning of a syllable

**open class** category of words that accepts new members (nouns, verbs, adjectives, and adverbs)

**overextension** use of words to apply to things beyond their actual meaning

**overgeneralization** application of a grammatical rule more broadly than it is generally applied

**palatalization** process that results from an interaction between either front vowels or a /y/ glide and a neighboring alveolar consonant, resulting in a palatal fricative or affricate palatal consonant

**parallelism** constraint on coordinating like categories (NP and NP, VP and VP, etc.)

**paraphrase (sentence synonymy)** sentence with the same entailments as another sentence

**parataxis** coordinate clause structure

**parole** in structural linguistics, the physical utterance itself; the use of a sign or a set of signs

**participle** form of the verb that follows an auxiliary verb *have* or *be*

**passive** syntactic operation in which an active sentence (*Beowulf killed Grendel*) is reordered: the object moves to the subject position, and the subject occurs in a prepositional phrase (*Grendel was killed by Beowulf*)

**pejoration** shift in words’ meanings over time from neutral or positive to negative

**personification** attribution of human qualities to something that is not human

**phoneme** unit of sound that makes a difference in the meaning of a word

**phonemic transcription** written recording of sounds using the distinctive phonemes of a language, resulting in a one-to-one correspondence between a sound and a symbol

**phonetics** study of speech sounds

**phonogram** symbol based on sound

**phonological rule** description of when a predictable variation of a particular sound occurs

**phonology** system of rules underlying the sound patterns in a language

**phonotactics** branch of phonology dealing with natural and unconscious restrictions on the permissible combinations of phonemes in a language

**phrase** syntactic unit (NP, VP, etc.) headed by a syntactic category (N, V, etc.)

**phrase structure** system of rules that organizes words into larger units or phrases

**pictogram** picture or symbol that represents an object or idea

**pidgin** a simplified, non-native “contact” language that develops to enable speakers of distinct languages to communicate

**pleonastic do** “dummy,” or semantically empty, auxiliary verb

**pluralia tantum** refers to a noun that is morphologically plural but semantically singular (*scissors*)

**polymorphemic** consisting of more than one morpheme

**polysemy** refers to words with two or more related meanings (*lip* = of a cliff or part of the mouth)

**polysynthetic language** language with a high number of morphemes per word

**portmanteau** see *blend*

**positive politeness** politeness strategy based on speaker’s constructing solidarity with the addressee

**post-vocalic [r]** distinctive feature of many dialects of English (which pronounce [r] in words such as *car* and which don’t: “*car*”)

**poverty of the stimulus argument** position that children do not receive enough data to acquire language simply from what they hear

**pragmatics** study of the meanings of sentences in context (utterance meaning)

**predicate** syntactically, the verb phrase (VP) in the clause [NP VP]

**prescriptive grammar** set of grammatical rules prescribed by a language authority

**presupposition** assumption that is implied by a word or sentence based on world knowledge

**productive rule** rule that regularly applies in the formation of new words or forms of words

**proform** word that substitutes for a phrase (AP, PP, or even a clause)

**pronoun reference** process that relates a pronoun to its antecedent, the phrase to which the pronoun refers

**proposition** assertion expressed by a sentence regardless of context or real-world facts

**Proto-Indo-European** attested parent language of members of the Indo-European language family, which spans Eastern and Western Europe and parts of Asia

**proto-language** single parent language from which all members of a language family may have descended

**psycholinguistics** study of how we acquire, produce, and understand language

**rationalism** philosophy based on the idea that we use innate knowledge, or reason, to make sense of the world

**recursion** property that allows phrase structure rules to generate phrases of infinite length

**reduplication** making a word by doubling an entire free morpheme (total reduplication) or part of one (partial reduplication); doubling of a syllable, a common syllable structure in children’s language

**regionalism** feature that distinguishes one regional dialect from others

**register** manner of speaking or writing style adopted for a particular audience (e.g., formal versus informal)

**regular sound correspondences** predictable sound changes across languages that show they are related (words that begin with /t/ in Germanic languages, such as *tooth/tame*, show up beginning with /d/ in Romance languages: *dental/domestic*)

**rime** vowel and any consonants following it at the end of the syllable

**root morpheme** morpheme to which an affix can attach



**runes** Norse alphabet of figures carved into wood or stone; each runic letter corresponds to a noun and represents its initial sound

**run-on/fused sentence** writing error in which two or more independent clauses are joined without punctuation

**Sapir-Whorf hypothesis** based on Edward Sapir's claim that language and thought mutually influence each other; refined by Benjamin Whorf, who claimed that the grammatical structure of a language determines speakers' perceptions of the world

**scientific method** formation of hypotheses that explain data and the testing of those hypotheses against further data

**semantic features** classifications of meaning that can be expressed in terms of binary features [ +/– ], such as [ +/–human ], [ +/–animate ], [ +/–count ]

**semantic fields** basic classifications of meaning under which words are stored in our mental lexicons (FRIENDS, for example)

**semantic shift** change in the meaning of words over time

**semantics** system of rules underlying our knowledge of word and sentence meaning

**sentence fragment** phrase or clause that is punctuated as a sentence (with a capital letter and a period) but is not a complete sentence

**sentence meaning** meaning of a sentence regardless of context or knowledge of the world (its linguistic meaning)

**sentence synonymy** see *paraphrase*

**shift in connotation** change in words' general meanings over time

**shift in denotation** complete change in words' meanings over time

**sibilants** natural class of "hissing" or "hushing" sounds in a language, which includes alveolar and palatal fricatives and affricates

**sign** the abstract link that connects sound and idea

**signified** in structural linguistics, the concept, idea, or meaning of the signifier

**signifier** in structural linguistics, a spoken or signed word or a word on a page

**silent syntax** unpronounced, yet understood, syntactic material in sentences

**simile** comparison, usually of two unlike things, in order to create a nonliteral image (*run like a deer*)

**slang** an informal word or expression that has not gained complete acceptability and is used by a particular group

**social network** social relationships that characterize a group of speakers

**sociolinguistics** study of how language varies over space (by region, ethnicity, social class, etc.)

**speaker meaning** meaning beyond the words alone, which the speaker assumes the hearer can interpret based on communicative context

**Specific Language Impairment (SLI)** disorder in which children do not acquire language in the normal way but are otherwise not generally cognitively impaired

**speech act** utterance intended to convey communicative force

**speech act theory** theory dealing with the construction of meaning in conversation by direct and indirect speech acts

**split brain** severed corpus callosum, usually to relieve epileptic seizures

**spoonerism** see *exchange error*

**stress** relative emphasis given to syllables in a word

**strong and weak adjectives** in Old English, the differential expression of case, number, and gender of adjectives, according to whether or not they are preceded by a determiner (weak adjectives are preceded by a determiner, and strong ones are not)

**strong and weak nouns** classifications of Old English nouns depending on how they are inflected to show case, gender, and number

**strong and weak verbs** in Old English, the differential expression of inflection through a vowel change (strong verbs) or through a regular affix (weak verbs); for example, *sing, sang, sung* (strong) and *walk, walked, walked* (weak)

**strong verb** verb that expresses inflection through vowel mutation (see also *strong and weak verbs*)

**structural linguistics** study of the relationship between signifier and signified and of how signs get their meaning from structure

**subject** syntactically, the noun phrase (NP) in the clause [NP VP]

**subject-auxiliary inversion** movement of an auxiliary verb to sentence-initial position (preceding the subject) to form a question

**subordinate clause** clause that is contained in another constituent



**substitution** process by which we replace a phrase with a pronoun (or other proform)

**suppletion** process of change whereby one form of a word has no phonological similarity to a related form of that word

**suprasegmentals** phonological phenomena that are larger than a single sound; includes syllables, stress, and intonation

**surface structure** clause in its derived order after movement and deletion rules have applied

**syllabary** system of writing based on syllable sounds

**syllable** basic unit of speech generally containing only one vowel sound (*nucleus*) and possibly an *onset* and a *coda* (called the *rime*)

**synesthesia** metaphorical language in which one kind of sensation is described in terms of another; for example, a smell may be described as *sweet* or a color as *loud*

**synonyms** words that have similar meanings (*purse/handbag*)

**syntactic ambiguity** a clause or phrase that has more than one meaning because it has more than one syntactic structure

**syntactic category** set of words that share a significant number of grammatical characteristics (nouns, verbs, etc.)

**syntax** system of rules and principles that describe how we organize words into phrases and phrases into larger units, the largest being the clause; also, the study of this system

**synthetic language** language in which syntactic relations are expressed by inflectional morphemes rather than by word order

**synthetic sentence** sentence that is true because it accords with real-world facts

**taboo word** forbidden word or expression interpreted as insulting, vulgar, or rude in a particular language

**tag question formation** syntactic rule that “copies” the subject and an auxiliary or modal verb in sentence-final position: *John left, didn’t he?*

**thematic roles** semantic roles, including *agent*, *patient*, *source*, *goal*, etc., that the verb assigns to its arguments

**tone** variation in pitch that makes a difference in the meaning of words

**transitivity marker** affix that indicates transitivity of verbs

**truth condition** whether a proposition is logically true or false, regardless of context or real-world facts

**underextension** use of words to apply to things more narrowly than their actual meaning

**Universal Grammar (UG)** set of linguistic rules common to all languages; hypothesized to be part of human cognition

**usage** language that is accepted as standard and that may or may not follow prescriptive rules

**utterance meaning** meaning of utterances in context; their unspoken or indirect meaning

**voicing** vibration of the vocal folds

**vowel** sound characterized by an open vocal tract, with no closure or obstruction

**vowel mutation** change of inflection through a change in vowel structure rather than through affixation

**VP deletion** syntactic operation in which a verb phrase (VP) is deleted but understood as referring to an antecedent verb phrase (*I don’t jog, but Olivia does.*)

**weak verb** verb that expresses inflection through regular affixation and sometimes vowel mutation (see also *strong and weak verbs*)

**Wernicke’s aphasia** form of aphasia characterized by fluent speech that makes little sense (see also *Broca’s aphasia*)

**wh-movement** movement rule in which an interrogative phrase is moved to sentence-initial position (*Who did Mary meet yesterday?*)

**Williams syndrome** rare genetic disorder that involves severe retardation, distinct physical characteristics, and uniquely expressive language ability

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### Content Word Categories with Examples

Noun	Verb	Adjective	Adverb
river, intelligence, Washington, scissors, furniture, fax, blog, hashtag	discuss, remember, annoy, feel, gallop, seem, textmessage	unhappy, fortuitous, beautiful, mad, tiny, crunk, chill, satellitic	hopefully, mad-deningly, fast, still, now, often

### Function Word Categories with Examples

Determiner	the, a, this, that, these, those, his, my	Preposition	without, in, on, over, behind, above, around
Numeral	one, five, ten, second, eighth	Conjunction	and, or, yet, for, but, so, nor
Quantifier	all, each, every, both, some	Degree Word	very, so, quite, rather, too
Pronoun	they, he, she, her, theirs, mine, yours	Auxiliary Verb	have, be, do
		Modal	may, might, can, could, will, would, shall, should, must

### English Verb Forms with Examples

Infinitive	(to) walk	(to) eat	(to) drink	(to) go	(to) bring	(to) be
Present tense	walks	eats	drinks	goes	brings	am/is/are
Past tense	walked	ate	drank	went	brought	was/were
Present participle	walking	eating	drinking	going	bringing	being
Past participle	walked	eaten	drunk	gone	brought	been



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